

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Hilda E. Smith

Serial No.: 09/767,041

Filed: January 22, 2001

For: STREPTOCOCCUS SUIS VACCINES

AND DIAGNOSTIC TESTS

Examiner: To Be Assigned

Group Art Unit: 1646

Attorney Docket No.: 4726US

NOTICE OF EXPRESS MAILING

Express Mail Mailing Label Number: EL740548307US

Date of Deposit with USPS: September 19, 2001
Person making Deposit: Blake Johnson

LETTER TO THE CHIEF DRAFTSMAN

Commissioner for Patents Washington, D.C. 20231

Sir:

Applicant submits herewith revised figures which correct errors in the drawings. Specifically, FIGs. 1, 3, 4, 5, 6, 7, 10 and 11 have been revised to incorporate the appropriate margin requirements. FIG. 2 has been revised to add –I–, –II–, and –III-- to the left of the figure and a better quality copy has been provided. A better copy of FIG. 8 is provided and FIG. 8 has been revised to incorporate the appropriate margin requirements. A better copy of FIG. 12 has been provided. FIGs. 9A and 9B have not been revised as they appear to comply with the margin requirements. Attached is a copy of the drawings with the proposed changes marked in red.

No new matter has been added. Approval of the proposed revisions is respectfully requested.

Respectfully submitted,

Krista Weber Powell Registration No. 47,867 Attorney for Applicants

TRASKBRITT, PC

P. O. Box 2550

Salt Lake City, Utah 84110-2550

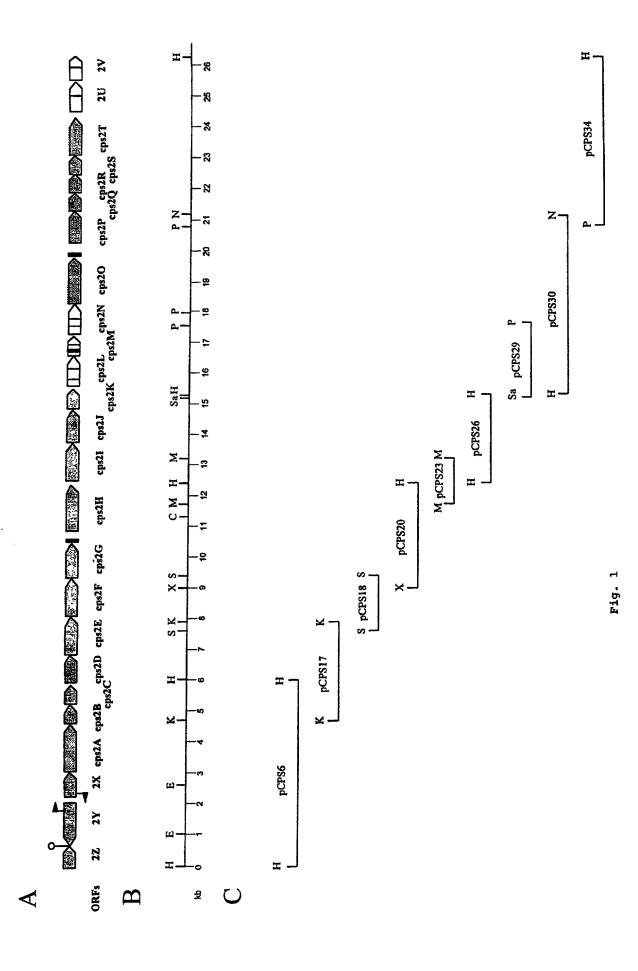
Telephone: (801) 532-1922

Date: September 19, 2001

Enclosures: Drawings with changes marked in red

Drawings reflecting proposed changes

N:\2183\4726\Ltr Draftsman.wpd 9/19/01



MW 1 2 3 4 5 6 7 8 9 10 11 12 13 MW

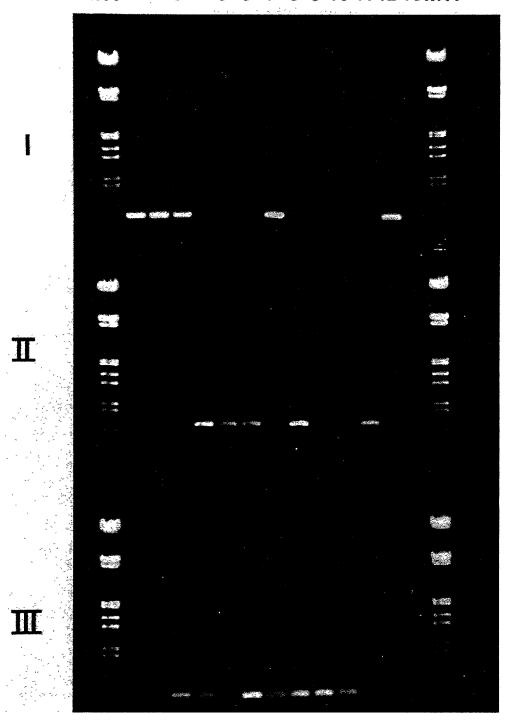


Fig. 2

3/59
AAGCTTGGAT ATTGATCACA TGATGGAGGT GATGGAAGCA TCTAAGTCTG CAGCGGGGTC
GGCGTGCCCA AGTCCGCAGG CTTATCAGGC AGCTTTTGAG GGAGCTGAGA
ACATTATCGT TGTGACGATT ACAGGTGGGC TATCGGGTAG TTTTAATGCG GCACGTGTAG
CTAGGGATAT GTATATCGAA GAGCATCCGA ATGTCAATAT CCATTTGATA
GATAGTTTGT CAGCCAGTGG GGAAATGGAT TTACTTGTAC ACCAAATCAA TCGCTTAATT
AGTGCAGGAT TAGATTTTCC ACAAGTAGTA GAAGCGATAA CTCACTATCG
GGAACACAGT AAGCTCCTCT TTGTTTTAGC GAAAGTTGAT AATCTTGTTA AGAATGGAAG
ACTGAGCAAA TTGGTAGGCA CTGTCGTTGG TCTTCTCAAT ATCCGTATGG
ACTGAGCAMA IIGGIAGGCA CIGICGITGG ICITCICARI AIGCGCAGG CCCCARARACA
TTGGTGAGGC AAGTGCTGAA GGAAAATTAG AGTTGCTTCA AAAGGCGCGT GGTCATAAGA
AATCTGTGAC AGCAGCCTTT GAAGAAATGA AAAAAGCAGG CTATGATGGT
GGTCGAATTG TTATGGCCCA CCGCAACAAT GCTAAGTTĆT TCCAACAATT CTCAGAGTTG
GTAAAAGCAA GTTTTCCAAC GGCTGTTATT GACGAAGTTG CAACATCAGG
TCTATGCAGT TTTTATGCTG AAGAAGGTGG ACTTTTGATG GGCTACGAAG TGAAAGCGTG
ATTCACAGAG TAATAATTTT GGGCTGTAAT TTCCGCTATA GAATAATCCC
CCTCTTCTTC TAAGTTCGAG GGGGATTGTT TGTATGAGAC TATTGGATTT CATTCATTCA
AATATCTTAC GAATTGCTCC AGTTTATCTG CAAAATCTTG TTCAAAGAAG
ATCTGTAAGA AATCAGCTTT CTGTCCGCTG AAATAATAAC ATTTTCCAAA CATGTGTTGG
ATGCTAGGAG AAAGAATCCC CTTGCTTAGC TGAAAGGTCA CGCTCCCCTT
TGGAATTCGA TACGGGATGT TTAAAGCGTA TTTCTCTAGA CAGTCTTTTA TTTTATTCCA
TTGAGCGTGA TAAATGTGAT GAAGATGCTG TGTGTTCCGC GCAAACATAC
CGTTATCAAT GTAGAGCGAG AGAGCTTTTT GCATGATAAG ATTGGTATCG TAGTCGATTA
GACTCTTATG TTTGATGAAG ATATCACGTA GCTGATTAGG AAGGCTGATT
GCACCGATTC GGAGGGCAGG AAAGAGTGTC GGTGTAAAAG ATTTTATATA GATGACGCGA
TTATCTGTAT CAAGATAGTG TAAAGGTAGG CTATGACTAG AGTCGAAATC
TGCTAAATAG TCATCCTCAA TGATGTAGAC ATCGTATTGC TTTGCTAATT TTACGATGGC
TGTTTTTGTT GCTATATCAT AGGTTGAACC GAGAGGGTTG TGCAAGCGAG
GAATTGTGTA GAAAAACTTA ATTTTTCCAG TTTGGAAGAT ACTTTCCAAT TCTTCTAGGT
CAATTCCATC TAAATTCCGT TCAATTGTTT GATAGGGGAT TCCTTGATGT
CGAATGAGCT CTATCATTCG TGAATAGGTA GGGTTCTCTA TCAAGATTTC CGTTTTTCCA
GCCAAGGTTT CCATTTGTGT GAGAATATAT AGAGCTTGTT GACTACCAGC
TGTGATAACC AGCTGGTCTT TTTTTGTATA GACATGATAG TCCATTAACA GACTTTGAAC
GGAGGAAATC AATTCTGCCA ATCCCTCTTG CTGGTGATAG TAGTTGAATA
GGTAATTTC CCGCCCAATA AGACTTTCTT TTAGACAAAT CCGAAAATCT TCATAGGTAA
TTCTTGAAAG TCTGTAGGAT TGAGCTCTAC AGGTATGGTC TTGGAAATCT
CTATCCTCTA AGATATAATA ACCGCTTTTT TCGACAGCGT AGATCTTATT TTGGTATTTT
AATTCCAACA TAGCCTTTTG GACAGTGTCT TTGCTACAAT GATATTGCTC
GCGGAGTTGA CGGATAGAAG GTAATTTCTC TCCACGTTTG AATCGATGTT CCTCTATTCC
AGTCAAAATA TCTTGGATGA TAACTTGATA TTTTTTCATC TAGGTCCCCT
TTTTTATAGA CTATGTTACT AGCTAGTATA TAGAAAAAAT TGAAGAAAGA CAATATATGA
ATAATGGGGT TGAGGTTCAG GAATTAAGCT ACTCTATGGT ATAATTAAGT
GATGAAAATA ATTATACCTA ATGCAAAAGA AGTAAATACA AATCTAGAGA ATGCCTCGTT
TTATCTCCTG TCTGATCGAA GCAAGCCGGT GCTGGATGCC ATAAGTCAAT
TTGATGTAAA AAAGATGGCT GCCTTTTATA AATTGAATGA AGCAAAGGCT GAGTTAGAAG
CTGACCGTTG GTATCGAATC AGGACAGGTC AAGCAAAAAC CTATCCAGCC
TGGCAGTTAT ATGATGGTCT CATGTATCGT TATATGGATA GGCGAGGTAT AGATTCGAAA
GAAGAAAATT ATTTACGTGA CCACGTTCGT GTAGCGACAG CCTTATACGG
ATTGATTCAT CCTTTTGAAT TCATTTCACC TCACCGCTTA GATTTTCAAG GGAGCTTAAA
GATAGGCAAT CAGTCTTTGA AACAGTACTG GCGACCGTAT TATGACCAAG
AAGTTGGTGA TGATGAACTG ATTCTCTCAC TGGCTTCGTC AGAATTTGAG CAGGTGTTTT
CTCCCCAGAT TCAGAAAAGA TTAGTTAAAA TTCTTTTCAT GGAAGAAAAA
GCAGGTCAGC TAAAAGTTCA CTCGACTATA TCAAAAAAAG GCAGAGGAAG ATTGCTGTCC
TGGTTGGCTA AGAACAATAT TCAGGAATTA TCGGACATTC AAGATTTTAA
GGTGGATGGC TTTGAATATT GTACTTCCGA ATCAACGGCA AACCAACTTA CCTTCATACG
ATCAATAAAA ATGTGAAAATT ATGAAAAAGA TAACGTTTTC CAGCGCTAAA
ATCAATAAAA AIGIGAAATT ATGAAAAAGA TAACGTTTTC CAGCGCIAAA
AAGGGTAGAA AAATATTAAT TTCTATGATA TAATGGATGC GTTATAGGTA AAAGTCTAGG
AAGGTTGTTT ATGAAAAAGA GAAGCGGACG AAGTAAGTCG TCCAAGTTCA
AATTGGTAAA TTTTGCGCTT TTGGGACTTT ATTCCATTAC TCTATGTTTG TTCTTAGTGA
CCATGTATCG CTATAACATC CTAGATTTCC GGTATTTAAA CTATATTGTG
ACGCTTTTGC TAGTAGGAGT GGCAGTATTG GCTGGATTAT TGATGTGGCG TAAGAAAGCG
CGCATATTTA CAGCGCTCTT ACTTGTTTTT TCACTGGTCA TCACGTCTGT

TGGGATCTAT GGAATGCAAG AAGTTGTAAA	ATTTTCAACA	CGACTAAATT	CAAATTCGAC
ATTTTCAGAA TATGAAATGA GTATCCTTGT	CCCAGCAAAT	AGTGATATTA	
CGGACGTTCG TCAGCTTACT AGTATCCTTG	CTCCAGCCGA	ATACGACCAA	GATAACATCA
CCCCTTTATT GGATGACATA TCCAAAATGG	AATCTACTCA	ACTAGCAACT	
AGCCCCGGGA CTTCTTACCT GACAGCATAT	CAATCTATGT	TGAATGGCGA	GAGTCAAGCG
ATCCTCTCA ACGGAGTTTT TACCAATATT	TTAGAAAATG	AAGATCCAGG	
CTTTTCTTCA AAAGTGAAAA AAATATATAG	TTTCAAAGTG	ACTCAGACTG	TTGAAACAGC
TACTARGERG GTGAGTGGAG ATAGCTTTAA	TATCTATATT	AGTGGTATTG	
ATCCTTATGG ACCGATTTCT ACGGTCTCTC	GTTCAGATGT	CAATATCATT	ATGACTGTCA
ATCGTGCGAC ACATAAGATT TTATTGACAA	CTACTCCACG	AGATTCATAC	
GTTGCTTTCG CAGATGGCGG GCAAAATCAA	TACGATAAAC	TAACACATGC	TGGTATTTAC
CCTCTCAATG CTTCTGTGCA CACCTTAGAA	AATTTTTATG	GGATTGACAT	
TAGCAATTAT GTGCGGTTGA ACTTCATTTC	CTTCCTTCAA	TTAATCGACT	TGGTGGGTGG
AATTGATGTA TATAACGATC AAGAATTTAC	AAGTTTACAT	GGGAATTATC	
ATTTCCCTGT TGGACAAGTT CATTTAAACT	CAGACCAAGC	ATTAGGCTTC	GTTCGAGAGC
CCTACTCTTT AACAGGGGGT GACAATGACC	GTGGTAAAAA	CCAGGAAAAA	
GTGATTGCTG CCTTGATTAA AAAGATGAGT	ACGCCAGAGA	ATCTAAAAAA	TTACCAGGCA
ATCCTATCTG GATTGGAAGG CTCAATTCAA	ACGGATTTGA	GCTTAGAAAC	
GATTATGAGT TTAGTGAATA CCCAACTAGA	ATCAGGAACA	CAATTTACAG	TAGAGTCACA
ACCATTGACA GGAACAGGAC GCTCAGACTT	ATCTTCTTAT	GCGATGCCTG	
GATCACAACT TTATATGATG GAAATTAACC	AAGATAGTCT	GGAGCAATCA	AAGGCAGCGA
TTCACTCCCT ACTTCTTGAA AAATAAAGAT	TTTAGGAGAA	AATATGAACA	
ATCAAGAAGT AAATGCAATC GAAATCGATG	TTTTATTCTT	ACTAAAAACA	ATTTGGAGAA
ACAAATTTT AATTCTCTTA ACTGCAGTGT	TGACTGCGGG	GTTGGCATTT	
CTCTACAGTA GTTTTTTAGT GACACCTCAA	TATGACTCCA	CTACCCGTAT	CTATGTAGTG
ACTICADATE TTGAAGCCGG TGCGGGCTTG	ACTAACCAAG	AGTTACAAGC	
CCCTACCTAT TTGGCAAAAG ACTATCGGGA	AATTATCCTA	TCACAAGATG	TATTGACACA
ACTACCARCE GRATTGRATC TGRARGAGAG	TTTGAAAGAA	AAAATATCAG	
TTTCTATTCC TGTTGATACT CGTATCGTTT	CTATTTCTGT	GCGTGATGCG	GATCCAAATG
ANGCOCCACG TATTGCAAAT AGCCTTCGCA	CCTTTGCAGT	GCAAAAGGTT	
CTTGAGGTCA CCAAGGTAAG CGATGTGACG	ACACTTGAAG	AAGCAGTCCC	AGCGGAAGAA
CCDACCACTC CABATACAAA ACGAAATATC	TTGCTTGGTT	TATTAGCTGG	
ACCTATCTTG GCAACAGGTC TTGTACTGGT	TATGGAGGTT	TTGGATGACC	GTGTAAAACG
TCCTCAGGAC ATCGAAGAGG TAATGGGATT	GACATTGCTA	GGTATAGTAC	
CAGATTCGAA GAAATTAAAA TAGGAGAACA	ATATGGCGAT	GTTAGAAATT	GCACGTACAA
ANACAGAGG AGTAAATAAA ACCGAGGAGT	ATTTCAATGC	TATCCGTACC	
ANTATTCAGC TTAGCGGAGC AGATATTAAG	GTTGTTGGTA	TTACCTCTGT	TAAATCGAAT
CARCCTARGA GTACAACTGC GGCTAGTCTC	GCTATTGCCT	ATGCTCGTTC	
AGGTTATAAG ACCGTCTTGG TGGATGCAGA	TATCCGAAAT	TCAGTCATGC	CTGGTTTCTT
CARCCAATT ACAAAGATTA CAGGTTTGAC	GGATTACCTA	GCAGGGACAA	
CAGACTTGTC TCAAGGATTA TGCGATACAG	ATATTCCAAA	CTTGACCGTA	ATTGAGTCAG
CARACCTTTC TCCCAACCCT ACTGCCCTTT	TACAAAGTAA	GAATTTTGAA	
AATCTACTTG CGACTCTTCG TCGCTATTAT	GATTATGTTA	TCGTTGACTG	TCCACCATTA
GCACTGGTAA TTGATGCAGC TATCATTGCA	CAAAAATGTG	ATGCGATGGT	
TOCACTACTA GAAGCAGGCA ATGTTAAGTG	CTCATCTTTG	<u>AAAAAAGTAA</u>	AAGAGCAGTT
GGAACAAACA GGCACACCGT TCTTAGGCGT	TATCTTGAAC	AAATATGATA	
TTGCCACTGA GAAGTATAGT GAATACGGAA	ATTACGGCAA	AAAAGCCTAA	TTTCTCAGAT
AACATAAGTT TGATAAGTAG GTATTAATAT	GATTGATATC	CATTCGCATA	
TONTATTEG TETEGATEAC GETCCCAAAA (CTATTGAAGA	GAGCCTGAGT	TTGATAAGCG
AACCTTATCG TCAAGGTGTT CGCTATATCG	TAGCGACATC	TCATAGACGA	
AAAGGGATGT TTGAAACACC AGAAAAAATC A	ATCATGATTA	ACTTTCTTCA	ACTTAAAGAG
CCACTACCAG AAGTTTATCC TGAAATACGA 1	TTGTGCTATG	GTGCTGAATT	
CTATTATAGT AAAGATATCT TAAGCAAACT	IGAAAAAA G	AAAGTACCAA	CACTTAATGG
CTCCTCCTAT ATTCTCTTGG AGTTCAGTAC (GGATACTCCT	TGGAAAGAGA	
TTCAAGAAGC AGTGAACGAA ATGACGCTAC T	PTGGGCTAAC .	TCCCGTACTT	GCCCATATAG
ACCOMPANCA TOCTOTOGOA TITOAGTOAG	AGAGAGTAGA	AAAGCTAATT	
CACAAGGAT GCTACACTCA GGTAAATAGT A	AACCATGTGT	TGAAGCCTGC	TTTAATTGGC
CARCGAGCAA AAGAATTTAA AAAACGTACT C	CGATATTTTT	TAGAGCAGGA	
TTTACTACAT TGTGTTGCTA GCGATATGCA I	TATATTAAA	AGTAGACCTC	CGTTTATGAG
GGAGGCGTAT CAGCTTGTAA AAAAAGAGTA T	TGGTGAGGAT	AGAGCGAAGG	
	. 3 cont.		

Fig. 3 cont.

		, 59		
CTTTGTTCAA GAAA	AATCCT TTGTTGATA	T TGAAAAATCA	AGTACAGTAA	CCTCATAGAA
ATAGTGGAGG AGCT	ATGAAT ATTGAAATA	g gatatcgcca	AACGAAATTG	
GCATTGTTTG ATATO				TATACCAAAT
GCTGATTTAA ATCG				
TGCATTTTTT ATATO	CTCGTA TGCCGGTTG	A ATTTGAGTAT	AGAGGTAATC	TGATAGAGTT
TGAAAAAACA TTTAA				
TTTCATTTAT GTTAC	GAGAAT AATTTCGCA	C TTTCAAGACG	TGGTGCCGTG	TATTTCACAT
TAATAAACTT CGTT	ITGGTA TACCTATTT	A ACGTAATTAT	TAAGCAGTTT	
AAGGATAGCT TTCT	ATTTTC GACAACCTA	T CAAAAAAAGA	CGATTCTAAT	TACAACGGCT
GAACTATGGG AAAAT				
AAAAAATCTT GTTGO				ATTTACCATT
ACCGCTCTAT TATTO				
TGGTCGACTA CGTCT	TTATA AATTTACCA	A GTGAATATTT	TGACTTAAAG	CAATTAGTTT
CAGACTTTGA GTTGT				
GGTTTTACTG TGTTG				CATCGTCACT
TTTTCCACAA ATTTT				
AGATATACTT GGAGO				TTTTGTTAAT
TCCAATTATT CGTAG				
TTGGACAGAA TGGAC	GCATA TTTACATTCT	ACAAGTTTCG	TTCGATGTTT	GTTGATGCCG
AGGTACGTAA GAAAG	AATTA ATGGCTCAA	ACCAGATGCA	AGGTGGGATG	
TTCAAAATGG ACAAC	GATCC TAGAATTACT	CCAATTGGAC	ACTTCATACG	AAAAACAAGT
TTAGATGAGT TACCA				
AGTCGGTACC CGTCC	GCCTA CAGTTGATGA	ATTTGAAAAA	TATACTCCTA	GTCAAAAGAG
AAGATTGAGT TTTAA	ACCAG GGATTACAGG	TCTTTGGCAA	GTGAGCGGAA	
GAAGTGATAT CACAG	ATTTT AATGAAGTC	TTAGGCTGGA	CCTAACATAC	ATTGATAATT
GGACCATCTG GTCAG	ACATT AAGATTTTAT	TGAAGACAGT	GAAAGTTGTA	
TTGTTGAGAG AGGGA	GGTCA GTAAGACTCC	TTTAAAACAA	AGAATAGTAG	TAGGGGATAT
GAGAACAGTT TATAT				
GTTTCGAGAC TTTCG	TAGAA AAATTAACTO	AGTATCAGAA	AGATAAATCA	ATTAATTATT
TTGTTGCATG TACAA	GAGAA AATTCAGCAA	AATCAGATAT	TACAGGAGAA	
GTTTTTGAAC ATAAT	GGAGC AACATGTTTI	AATATTGATG	TGCCAAATAT	TGGTTCAGCA
AAAGCCATTC TTTATO	GATAT TATGGCTCTC	AAGAAATCTA	TTGAAATTGC	
CAAAGATAGA AATGA	PACCT CTCCAATTTT	CTACATTCTT	GCTTGTCGGA	TTGGTCCTTT
CATTTATCTT TTTAAC	GAAGC AGATTGAATC	AATTGGAGGT	CAACTTTTCG	
TAAACCCAGA CGGTCA	ATGAA TGGCTACGTG	AAAAGTGGAG	TTATCCCGTC	CGACAGTATT
GGAAATTTTC TGAGAC	STTTG ATGTTAAAAT	ACGCTGATTT	ACTAATTTGT	
GATAGCAAAA ATATTO	GAAAA ATATATTCAT	GAAGATTATC	GAAAATATGC	TCCTGAAACA
TCTTATATTG CTTATO	GGAAC AGACTTAGAT	AAATCACGCC	TTTCTCCGAC	
AGATAGTGTA GTACGT	rgagt ggtataagga	GAAGGAAATT	TCAGAAAATG	ATTACTATTT
GGTTGTTGGA CGATTT	rgtgc ctgaaaataa	CTATGAAGTA	ATGATTCGAG	
AGTTTATGAA ATCATA	ATTCA AGAAAAGATT	TTGTTTTGAT	AACGAATGTA	GAGCATAATT
CCTTTTATGA GAAATT	GAAA AAAGAAACAG	GGTTCGATAA	AGATAAGCGT	
ATAAAGTTTG TTGGAA	CAGT CTATAATCAG	GAGCTGTTAA	AATATATTCG	TGAAAATGCA
TTTGCTTATT TTCATG	GTCA CGAGGTTGGA	GGAACGAACC	CATCTTTACT	
TGAAGCACTT TCTTCT	ACTA AACTAAATCT	TCTTCTAGAT	GTGGGCTTTA	ATAGAGAAGT
AGGGGAAGAA GGAGCG	AAAT ACTGGAATAA	AGATAATCTT	CACAGAGTTA	
TTGACAGTTG TGAGCA	ATTA TCACAAGAAC	AAATTAATGA	TATGGATAGT	TTATCAACAA
AACAAGTCAA AGAAAG	ATTT TCTTGGGATT	TTATTGTTGA	TGAGTATGAG	
AAGTTGTTTA AAGGAT	AAGT TATGAAAAAG	ATTCTATATC	TCCATGCTGG	AGCAGAATTA
TATGGGGCAG ATAAGG	TTCT CTTGGAACTT	ATAAAAGGCT	TAGATAAGAA	
TGAATTTGAA GCGCAT	GTTA TCCTACCTAA	TGATGGAGTC	CTAGTGCCAG	CATTAAGAGA
AGTTGGTGCG CAAGTT	GAAG TTATTAACTA	TCCAATTCTA	CGTAGGAAAT	
ATTTTAATCC AAAAGG	GATT TTTGACTACT	TCATATCATA	TCATCACTAT	TCTAAACAGA
TTGCTCAATA TGCCAT	AGAA AATAAGGTTG	ACATAATTCA	CAATAATACT	
ACCGCTGTCT TAGAAG	GCAT TTATCTGAAG	CGAAAACTCA	AATTACCTTT	GTTGTGGCAT
GTTCATGAGA TTATTG	TCAA ACCTAAATTC	ATCTCTGATT	CGATCAATTT	
TTTAATGGGG CGTTTT	GCTG ATAAGATTGT	GACAGTTTCA	CAGGCTGTGG	CAAACCATAT
AAAACAATCA CCTCATA	ATCA AAGATGACCA	AATCAGTGTA	ATCTACAATG	
GGGTAGATAA TAAAGTO	GTTT TATCAGTCCG	ATGCTCGGTC	TGTTCGAGAA	AGATTTGACA
TTGACGAAGA GGCTCTT	IGTC ATTGGTATGG	TCGGTCGAGT	CAATGCGTGG	
 -				

		J.		
AAAGGACAAG GAGATTTT				
ATCGCCTTTA TAGCAGGA				
AGAATTAGAA AAGAAGAT				
TTATGCAAAT ACCACTGA				
CAAGTACTAA TCCAGACC				
CTGTTGTCGG TTACCGAC				
GTTAACGGTT TCTTAGTC				
TTATCGGAAA ATATAAAT				
ACGTCAAAAA GAACATTT				
CTCCCTCAAA GTATACTG				
TTATCGTATT CTCATTCG				ATTTCTAAAG
GGCACCTCTA TAAACTCC	CA AAATTGCGAA	TTTGGAGTTA	CGAAAGCCTT	
GTTAAATCAA CATTTTAAA				
TAACAGAAGG GAGCCTTC				
ACTGTTAAAT CAATATTT				
CTATGCACTA TATTTCGAM				
CGTGGCAAAA AAGAGAATO	SA GGAATTTATG	AAAATTATTT	CTTTTACAAT	GGTTAATAAC
GAAAGTGAGA TAATAGAGT	C ATTTATACGG	TATAATTATA	ACTTTATTGA	
CGAGATGGTC ATTATTGAT				TTTTTAATTT
GATTAAAGAG GGATATAAA	A TATCCGTATA	TGATGAGTCT	TTAGAGGCAT	
ATAATCAGTA TCGACTTGA				AAAAATCCAG
ATTTGATAAT ACCTTTGGA				
CCACGGAAAC TTTTGGAAC	A ACTGGACTTA	GAAAAGATAC	ATTATGTGAA	TTGGCAATGG
TTTGTTATGA CTAAAAAAG				
AATGCAATAT TGTTTTGAA				CAGTTACTAA
ATGTATAATT TCCGCTAAG				
TGGGACATCA CACTGTTTT				AATGATTTGA
AATTTGCACA TTATCGAGC				
ATTTGTTACA CTATTCGCG				AGCTCAAAGA
ACAAATCAGA TGGCGCTCA				
GAGAGAAGCC TCTTATTCA				TTGATTTAAG
TTTTTGTAAA GAAAATATT				
CAGTAGCAGA ACGCGTGAT				TATAATGTGG
AGCGAAAACA AAAAGAAAA				
GATGGGTTAA AAGGAGATGA				GACGATCTTA
ACTGAAATGT ATAACGTCAG	AGGCTTACTT	ACCGATAATC	ACCAAATTAA	
ATTTCTCAAA GTTAATTATA				TTTTACCGCA
TGAATTTATT GTTGTACCAC				
AGTATGTTGG TACAGGTGTA				TATCGAAAAG
AGATAGGCTT TATTGGTAAT	TTGTATGCGC	TTTTAGGATT	TGTTCCGAAT	
ATGCTCAATA GAATTTATCT				TATTATAAAA
ATCAAGTCGA GATTGTGAGA				
TAATGCAGGC AGATAGGAGA				AATAATTTGT
TTTTTGTTGC CATAGCGTTT	ATGGGCATAA :	PTATTAGTAA	TTCGCAAGTT	
GTTCTAGCGA TAGGCAAAGC				TTTGATTTTA
TGTATAGTTA ATGATTTATT				
ATTAGGGTAT TTGTTTCTTA				AGCAAATTCT
TCCTATAACA ACTAAAATAT				
TTTTAGCAAC GTTGCCAATA				CGGATTCAA
ATCATTTGTT ATTCGCTCTT				
GGGGCAACGA TGTTCACGGG				TITTAATGGA
GGATTGACGC ATAAGAACTT	TTTTGGAATA A	CTATTTTAA	TGGGGTTCGT	mm 3 mmm =
ATTAACTTAC TTGGCGTATA	AGTATGGTTC C	TATAAAAGA .	ACGGATCGTT	TTATTTTAGG
ATTAGAATTG TTTTTGATTC	TTATTTCAAA C	ACACGCTCA	GITTATTTAA	~~~~~
TACTATTGCT TTTTCTATTT				CAAAGACAAT
GGAGTACGCT TAAATATATT	TCCATGCTAT T	TTGTGCTAT	TTTTTTATAC	ma amoom
TATTTCTTTG GTTTTTTAAT	AACACATAGT G	ATTCTTACG (CTCATCGCGT	TAATGGTCTT
ATTAATTTTT TTGAGTATTA	TAGAAATGAT T	GGTTCCATC '	TAATGTTTGG	mm 1 C 1 C C C C C
TGCAGCGGAT TTGGCATATG	GGGATTTAAC T	TTAGACTAT (SUTATAAGGG	1 TAGAUGUGT
TTTAGGTTGG AATGGAACGC	TIGHNATUCE C	I I ACIGAGI	AMILDIAM	

AAAATGGTTT TATCGGTCTG GTAGGGTATG GGATTGTTTT ATATAAACTT TATCGTAATG TAAGAATATT AAAAACAGAT AATATAAAAA CAATAGGAAA GTCTGTATTT ATCATTGTAG TCCTATCTGC AACAGTAGAA AATTATATTG TAAATTTAAG TTTTGTATTT ATGCCAATAT GTTTTTGTTT ATTAAATTCT ATATCTACTA TGGAATCAAC TATTAACAAA CAACTGCAAA CATAAATTGG CAGGAATAGA GTTTTGAGTT GCTATTAATT TGGTAGAGCA TATGTTCTAT AGGTGGCAAG ATAAAGATAG TATTTTTTAC ATGATGATTT TTATGATAGC AAAGCAAGTT ACGGCATAAA AGGAATTAGA GGATGGAAAA AGTCAGCATT ATTGTACCTA TTTTTAATAC GGAAAAGTAC TTAAGAGAGT GTTTAGATAG CATTATTTCC CAATCGTATA CTAATCTAGA GATTCTTTTG ATAGATGACG GTTCTTCAGA TTCATCAACG GATATATGTT TGGAATACGC AGAGCAAGAT GGTAGAATAA AACTTTTCCG GTTACCAAAT GGTGGTGTTT CAAACGCAAG GAATTACGGT ATCAAAAATA GCACAGCAAA TTATATTATG TTTGTAGATT CTGATGATAT TGTTGACGGC AACATTGTTG AGTCCTTATA CACCTGTTTA AAAGAGAATG ATAGTGATTT GTCGGGAGGG TTACTTGCTA CTTTTGATGG AAATTATCAA GAATCTGAGC TGCAAAAGTG TCAAATTGAT TTGGAAGAGA TAAAAGAGGT GCGAGACTTA GGAAATGAAA ATTITCCCAA TCATTATATG AGCGGTATCT TTAATAGCCC TTGTTGCAAA CTTTATAAGA ATATATATA AAACCAAGGT TTTGACACTG AACAGTGGTT AGGAGAGGAC TTATTATTTA ATCTAAATTA TTTAAAGAAT ATAAAAAAAG TCCGCTATGT TAACAGAAAT CTTTATTTTG CCAGAAGAAG TTTACAAAGT ACTACAAATA CGTTTAAATA TGATGTTTTT ATTCAATTAG AAAATTTAGA AGAAAAAACT TTTGATTTGT TTGTTAAAAT ATTTGGTGGA CAATATGAAT TTTCTGTTTT TAAAGAGACG CTACAGTGGC ATATTATTTA TTATAGCTTA TTAATGTTCA AAAATGGAGA TGAATCGCTT CCAAAGAAAT TGCATATATT TAAGTATTTA TACAATAGGC ATTCTTTAGA TACTCTAAGT ATTAAACGAA CGTCCTCTGT TTTTAAAAGA ATATGTAAAT TAATTGTTGC TAATAATTTG TTTAAAATTT TTTTAAATAC TTTAATTAGG GAAGAAAAA ATAATGATTA ACATTTCTAT CATCGTCCCA ATTTACAATG TTGAACAATA TCTATCCAAG TGTATAAATA GCATTGTAAA TCAGACCTAC AAACATATAG AGATTCTTCT GGTGAATGAC GGTAGTACGG ATAATTCGGA AGAAATTTGT TTAGCATATG CGAAGAAAGA TAGTCGCATT CGTTATTTTA AAAAAGAGAA CGGCGGGCTA TCAGATGCCC GTAATTATGG CATAAGTCGC GCCAAGGGTG ACTACTTAGC TTTTATAGAC TCAGATGATT TTATTCATTC GGAGTTCATC CAACGTTTAC ACGAAGCAAT TGAGAGAGA AATGCCCTTG TGGCAGTTGC TGGTTATGAT AGGGTAGATG CTTCGGGGCA TTTCTTAACA GCAGAGCCGC TTCCTACAAA TCAGGCTGTT CTGAGCGGCA GGAATGTTTG TAAAAAGCTG CTAGAGGCGG ATGGTCATCG CTTTGTGGTG GCCTGGAATA AACTCTATAA AAAAGAACTA TTTGAAGATT TTCGATTTGA AAAGGGTAAG ATTCATGAAG ATGAATACTT CACTTATCGC TTGCTCTATG AGTTAGAAAA AGTTGCAATA GTTAAGGAGT GCTTGTACTA TTATGTTGAC CGAGAAAATA GTATCATAAC TTCTAGTATG ACTGACCATC GCTTCCATTG CCTACTGGAA TTTCAAAATG AACGAATGGA CTTCTATGAA AGTAGAGGAG ATAAAGAGCT CTTACTAGAG TGTTATCGTT CATTTTTAGC CTTTGCTGTT TTGTTTTTAG GCAAATATAA TCATTGGTTG AGCAAACAGC AAAAGAAGCT TCTCCAAACG CTATTTAGAA TTGTATATAA ACAATTGAAG CAAAATAAGC GACTTGCTTT ACTAATGAAT GCTTATTATT TGGTAGGGTG TCTTCATCTT AATTTTAGTG TCTTTCTGAA AACGGGGAAA GATAAAATTC AAGAAAGATT GAGAAGAAGT GAAAGTAGTA CTCGGTAAGA ATGTTGTAAT AAATGGTTGA AAGAAAAGGG GATTAAAATG AATCCAACAA ATAGTAGAAT AGCACTCTTT GATACGATTA AATGTATCAT GGTACTTTGT GTTATTTTTA CACATCTGGA TTGGTCTGTT GAGCAGCGTC AATGGTTTAT CTTTCCGTAT TTCGTTGACA TGGCTGTTCC AATTTTTCTG TTGCTTTCTG CCTATTTTCG AACGAATAAG TGGAATACAA AACAAGAGAC GCTAAAGCTC AAGTTCAGCA GTGGTATAAA AGAAAGTATA AACATGCTTT GTCTCTATGC TATCGTGATG GCTGTTAATG TTTTATTGAG CTATTCGAGA ACCATCTGAT AGGAGTAAAG CCTTTTTCAG GTTCTTCATC GCTCCGTTCA TTTGTCCTGT GGCTACTTTC TGGAGAATCG GGTCCAGGGA GTTGGGAGTT ACTATGTTCC GTTGTTGATT CAGGTAGTTT TTTTATTACC AATTTTGTAT GTTCTTTCG AGAAAATAA ATGGTTGGGC TTGCTTACTT GTTTTTTAGT AAACTTTTCA GTGGATGCCA TATTTGCTAA CATGGCTGAA CACGGCATAT ATATATAGAC TAATATCACT TCGTTATCTT TTTGTTCTAG GGCTTGGTTT TTTCTTTCAA AGCAGGATGT GCGTTCCAAG GTAGATACTT TCATTGCGAC CCTATTTGGG ATTATTGGAG CAATTCTGAT TTTTGTGAAT CATTCTATAG AGCCCTTCTC CTGGTTTTAT ATTTTTTATG ATAAAGTATG GACAGAAGAT TCCAGCAATA CTGTTGTCAA AATTGGGAGT TGCTTCTTAT CATATCTACT TGACCCAGAT GCTGTATTTT TCAGTAGTCG

CACCATTTTT AGCAGTGCAA TTTAAGGTAT CTTCGTTGAA TTTGTGGAAC GGCTTGTTTA CCTTTCTAAT TTGCCTGTTT GGTGGCTATA TTTTCTACAA AGTGGATCTG TTTATGAGAG TACGTGGAAA ACGATAATGA CTCATTTCAG ATTAGCAGAT GCCATTTCGT TTATTAGCAG ATTCGCATGT TAATATTCCG ACAAAGAAAT TCAAATAGGT TGACGAGAGA GGAGTGGTAT CTGTTTCTAA ACCCCAGTAT CCCCCTTTAT TTTCAAAGCT ATATTTATTA ACTGAACAAG GAGAATTTTT AAGAGAACTG TTTGTTTAAT CCCAGCACGA TCTGGTTCGA AAGGCTTACC GAATAAAAAC ATGCTATTTT TGGACGGGAA ACCCATGATT TTTCACACGA TTGATGTGGC AATTGAATCA GGTTGTTTTG AGAAAGAAGA CATCTATGTC AGTACGGATT CAGAAATGTA TAAGGGGGGC ACCTCTATAA ATTCCCAAAA TTGCGAATTT GGAGTTACGA AAGCCTTGTT AAATCAACAT CTTAAATTTT AGAAAATTAG TTTTTAGAGG TCCCCAAGGG GATTTGCGAG ACAAGAGGCA TCAATGTATT GTTAAGACCC AAAGAACTAT CTACTTATCA TACTCCATCG AATGAAGTCA GTACGCACTT TTTTACGAAT CTGGATTTTA TGAAGATTGT ATATTTGTTC TTCTGCAAGT CACCTCACCG TTACGGACTG GCGAACAGAT AAAAGAAGCC ATGAATATGT ACTTACAGGG GGACTCAGAA AATGTTTTGC ATTTCAATGA TGAAGGGCAA GAAAGAGTGA ATCAGTACAT TATCGAAGCT GTACAGGGGT TATAAAAAGG GGTTACTTAT CCTTAAAGTC TGTATGTAGA AGGAGAAAA TTGAGACGAA TTTATATTTG CCATACGATG TATCAGATCC TGATTTCCTT GTTAAAGATG GACGTTGAGA GAGATAGTTT GATGTCCGTT GATATCATCG GGCATTTTCC AGATGTCAGG GAGCAACTGC AGCAGCATGT TCATCTAATC GAGGGAGACG GAGCGTTCAT TTGATCTATA TTCTTTGATA GCTAGATCAA AAACAAAAGA ACGCCTTTCC TTGTTACAGA GCTATGACGA GGTGATCATT TTTCAAGATC ACCGTCAAGT CGGTCATTTT TTAAATAAAC ATCGGATTCC CTATTCTCTT TTGGAGGATG GTTATAATTT TTTCAAGGAT AAAAGAGTGT GCGATTTGGA GTCAATTCAA TCATCTGTCT GGAAAAGACT CTTTTATCAA TGGTATTTTA AACCAACATA TTTGATTGGT TCAAGTCTCT ATTGTCAATC CATTGAGGTC AATGATCTGT CGCTCGTACA ATTTGACTAG GCTTATAAAC CCTTTGTAGA AGTTCCGAGA AAGCAATTAT TTGATCAAGC ATCGCCAGAG AAGGTGCAAG CGCTGCTGCA GATATTTGGA GCAAGGGCGA TAGTAGCGGA TGAAGAGTCT TCTCAAAAAC GATTGCTATT ATTGACCCAG CCCTTGTCTT GGGATTATCA TGTGACCGAA GAGAGTTGTT GGAGATTTAT GTAGCAGGTC TTGCCCCTTA TCGGGAAGAC TATACAATCT ACATAAAACC GCACCCACGA GATGGGGTTG ATTATTCATT TCTGGGTAAG GCTGTGGTGC TTCTGCCTCA AGGTATTCCG TTTGAGTTGT TCGAAATGGC AGGTAATATC CGTTTTGATA TCGGTATGAC CTATAGTTCG TCTGCTTTAG ATTTTTTAAA TTGTTTTGAA GAGAAAGTGT ATTTAAAGGA CACTTTTCCT CTTCTTTCAA AAAATGATAT TTTGCGTGAG GGGATAGAAT AGGAGGATTC ATGTCTAAAA AATCAATAGT TGTCTCAGGT CTCGTCTATA CGATTGGAAC CATCCTCGTT CAGGGATTAG CCTTCATTAC CCTCCCCATC TATACTCGTG TCATTTCTCA GGAAGTATAT GGGCAGTTTA GCTTGTATAA TTCGTGGGTG GGGCTAGTTG GTCTCTTTAT CGGTCTACAG TTAGGTGGGG CTTTTGGCCC GGGATGGGTA CACTTCCGCG AGAAATTTGA TGATTTCGTA TCCACCTTGA TGGTCTCTTC TATCGCTTTC TTTTTACCAA TTTTTGGGCT ATCTTTTCTC CTCAGTCAGC CCCTATCGCT CCTATTTGGT TTGCCTGATT GGGTCGTTCC GCTTTACTTT TTGCAAAGTT TTATGAGTGT TGTGCAAGGA TTTTTTACGA CCTATTTAGT GCAGCGGCAG CAGTCCATGT GGACTTTACT CCTATCGGTA CTGAGCGCTG TTATCAACAC TGCTTTATCT TTATTTCTCA TCTTTTCGAT GGAGAATGAT TTCATCGCTC GTGTAATGGC AAACTCGGCA ACGACTGGTG TTTTTGCTTG TGTGTCCTTG TTGTTTTTCT ATAAGAAGAT TGGGCTTCAT TTTCGAAAGG ACTATCTTCG GTATGGTTTA AGTATATCGA TTCCTCTTAT TTTTCATGGA TTAGGTCATA ATGTACTCAA TCAATTTGAC AGAATCATGC TCGGCAAGAT GCTAACACTG TCAGATGTAG CCCTATACAG TTTCGGCTAC ACACTTGCGT CTATCTTACA AATTGTGTTT TCGAGCTTGA ATACGGTATG GTGTCCGTGG TATTTTGAGA AAAAGAGAGG TGCAGATAAA GATTTGCTCA GTTATGTCCG TTACTATCTG GCGATTGGCC TGTTTGTGAC TTTTGGATTT CTAACAATTT ACCCTGAATT AGCGATGTTG TTAGGTGGAT CTGAGTATCG TTTCAGTATG GGATTTATTC CCATGATTAT TGTCGGGGTG TTCTTTGTAT TTCTTTATAG TTTTCCAGCC AATATCCAGT TTTATAGTGG AAATACAAAG TTTTTGCCAA TTGGTACTTT TATAGCAGGT GTACTAAATA TTTCCGTCCA CTTTGTTTTG ATACCGACAA AGAATTTATG GTGCTGCTTT GCAACGACTG CTTCCTATCT GTTGTTGCTA GTCTTGCATT ATTTTGTTGC TAAGAAAAG TATGCTTACG ATGAAGTTGC GATTTCAACA TTTGTTAAGG TAATTGCTCT TGTTGTCGTC TATACAGGCT TGATGACAGT ATTTGTCGGT TCAATCTGGA TTCGTTGGTC ACTAGGAATA GCGGTTCTAG TCGTTTATGC CTACATTTTT AGAAAGGAAT TAACAGTTGC CCTCAATACA TTCAGGGAAA AACGGTCTAA

Fig. 3 cont.

9/59 ATAAGGGCAC CTCTATAAAC TCCCAAAATT GCGAATTTGG AGTTACGAAA GCCTTGTTAA ATCAAACATT TTAAATTTTA GAAAATTAGT TTTTAGAGGT CCCCATATAA AAACGTCCCA AATGAGAGGT GCTCATAAGA ATTGACCATC ACTGCCATCT ACCCAAAGTT CAAGTATTCT CTACCATGAA AATTGTGCTA TAATCAAGTA TAAAGAAGGG AATGTTTCTT AAAGGACGTA TGCGCCTCTG CTTATGCCAG AAGTCATGAG GTAAATCTCC CTAAAAATTG GGTAGAAAAG CAGATTAAAC TTCCACCAAT CTATTGAAGA TCGTGTTGAA GAGCAGGCTT TAGAAGCAAC AAGCCCTGAG ACTATTCGAA AGAAATCTAG GGCTATTTTT TCTAATCGGC TATCAGAAGT GAAGTAGCGA TCTTTATTAG TGTTCTTTTA CTACTTAAGG AAAACCAAGC TGCTCCCTCA AGACTTTATG GGAGCGATTT ACAGTCATTT TTAGAAAGGA AATAAAATGG TTTATATTAT TGCAGAAATT GGTTGTAATC ACAACGGTGA TGTTCATCTA GCACGGAAAA TGGTAGAAGT TGCCGTTGAT TGTGGTGTGG ATGCCGTTAA ATTTCAGACA TTTAAGGCAG ATTTGTTGAT TTCAAAATAC GCACCAAAGG CCGAATACCA AAAAATTACA ACAGGAGAGT CAGATTCTGA GCTCGAAATG ACTCGTCGTT TGGAATTGAG CTTTGAAGAG TATCTTGATT tgcgtgatta ctgtcttgaa aagggagttg atgtgttttc gacacctttt gatgaggaat CATTGGACTT CTTGATTAGC ACAGATATGC CCGTTTATAA GATTCCATCT GGTGAGATTA CCAATCTTCC CTATTTGGAA AAAATTGGTC GTCAAGCTAA GAAAGTTATT CTTTCAACTG GTATGGCTGT TATGGATGAA ATTCATCAAG CGGTGAAGAT TTTGCAGGAA AATGGAACGA CCGATATTTC GATTTTGCAT TGTACAACCG AGTATCCAAC CCCTTACCCT GCTTTGAATT TGAATGTCTT GCATACCTTG AAAAAAGAAT TTCCAAACTT AACAATTGGC TATTCAGACC ATAGTGTTGG TTCAGAAGTA CCCATCGCTG CTGCAGCAAT GGGAGCTGAA TTGATTGAAA AGCACTTTAC TCTGGACAAT GAAATGGAAG GACCAGATCA TAAAGCGAGT GCTACTCCTG ATATCTTAGC AGCCTTGGTA AAAGGAGTGA GGATAGTGGA ACAATCTCTT GGTAAATTTG AAAAAGAGCC AGAAGAAGTT GAAGTACGAA ATAAAATTGT AGCTAGAAAA TCTATTGTTG CCAAAAAAGC AATTGCTAAA GGCGAAGTCT TTACAGAAGA AAACATCACT GTCAAAAGAC CAGGAATGG AATTTCGCCA ATGGAATGGT ACAAAGTCTT GGGGCAGGTG AGTGAGCAGG ATTTTGAGGA AGACCAAAAT ATTTGCCATA GTGCTTTTGA AAATCAAATG TAAGCGGAGT AAGGATGAAA AAAATTTGTT TTGTGACAGG CTCTCGTGCC GAATATGGGA TTATGCGTCG CTTATTGAGC TATCTACAGG ATGATCCAGA AATGGAGCTG GATCTTGTAG TGACAGCCAT GCATCTAGAA GAAAAATATG GGATGACGGT CAAAGACATC GAAGCGGACA AGCGTAGGAT TGTCAAGCGG ATTCCATTGC ATTTGACGGA TACGTCTAAG CAGACAATCG TCAAATCTTT AGCGACCTTG ACAGAGCAAC TCACGGTTCT TTTTGAAGAA GTCCAGTATG ACTTGGTGTT GATTCTGGGG GATCGCTATG AGATGCTACC AGTTGCCAAT GCTGCGTTGC TTTATAATAT TCCTATTTGC CATATTCATG GTGGTGAAAA AACCATGGGA AATTTTGATG AGTCGATTCG CCATGCCATT ACCAAGATGA GTCACCTTCA TCTGACATCA ACGGATGAAT TTAGAAATCG TGTCATTCAA CTAGGAGAAA ATCCAACCAT GTACTGAACA TCGGAGCTAT GGGTGTTGAA AATGTTTTAA AACAAGACTT TTTGACAAGA GAAGAGTTGG CGATGGAACT TGGAATTGAT TTTGCCGAGG ATTACTATGT TGTACTCTTT CACCCTGTTA CCTTGGAGGA TAACACAGCC GAAGAACAAA CGCAGGCCTT ATTAGATGCT CTAAAAGAAG ATGGTAGCCA GTGTTTGATA ATTGGATCCA ATTCGGATAC ACATGCCGAT AAGATAATGG AATTGATGCA TGAATTTGTA AAACAAGACT CTGATTCTTA CATCTTTACT TCGCTTCCAA CTCGTTATTA CCATTCCTTG GTCAAGCATT CACAAGGTTT AATAGGGAAT TCTTCGTCAG GTTTGATTGA AGTGCCCTCA TTACAGGTTC CGACCTTAAA TATTGGAAAT CGCCAATTTG GACGTTTGTC AGGACCGAGT GTGGTACATG TTGGAACTTC TAAGGAAGCG ATTGTTGGTG GTTTGGGGCA ATTACGTGAT GTGATAGATT TTACCAATCC ATTTGAACAA CCTGATTCTG CTTTACAAGG TTATCGAGCT ATCAAGGAAT TTTTATCTGT ACAGGCCTCA ACCATGAAAG AGTTTTATGA TAGATAGGGG AGAAAGTTTG ATGAAAAAG TAGCCTTTCT AGGAGCGGGT ACCTTTTCAG ATGGTGTCCT TCCTTGGTTG GATAGAACTC GATATGAACT CATTGGATAT TTTGAAGATA AACCGATCAG TGACTATCGT GGCTATCCTG TATTTGGTCC CTTGCAAGAT GTCCTAACCT ATTTGGATGA TGGAAAAGTA GATGCTGTCT TCGTCACTAT AGGTGACAAT GTCAAGCGCA AGGAAATCTT TGACTTGCTT GCCAAAGATC ATTATGATGC TTTGTTCAAC ATCATTAGCG AGCAAGCCAA TATTTTTTCC CCAGATAGTA TCAAGGGACG AGGGGTTTTC ATAGGTTTTT CAAGTTTTGT AGGAGCCGAT TCCTATGTCT ATGACAATTG TATCATCAAT ACGGGTGCCA TTGTGGAACA TCATACCACG GTGGAGGCCC ATTGTAACAT TACTCCAGGA GTGACCATAA ATGGCTTGTG CCGTATCGGA GAAAGCACTT ATATTGGAAG TGGTTCAACA GTGATTCAAT GTATCGAGAT TGCACCTTAT ACAACATTGG GGGCAGGGAC AGTTGTTTTG AAATCGTTGA CGGAGTCAGG GACCTATGTT

Fig. 3 cont.

GGTGTACCTG CTAGAAAGAT TAAATAGGTG AATTGATGGA ACCAATTTGT CTGATTCCTG CTCGGTCAGG ATCAAAAGGT TTACCAAATA AAAACATGTT ATTTTTAGAT GGTGTACCGA TGATTTTCCA TACCATTCGA GCTGCGATTG AGTCTGGATG TTTTAAGAAA GAAAATATAT ATGTCAGTAC TGATTCAGAG GTTTACAAGG AAATTTGTGA AACAACTGGG GTTCAAGTCC TCATGCGTCC AGCTGACTTG GCGACAGATT TTACAACCTC TTTTCAACTG AACGAACATT TTTTACAAGA TTTTTCTGAT GACCAAGTAT TTGTTCTCCT GCAAGTTACG TCCCCATTAA GATCGGGAAA ACATGTCAAG GAGGCGATGG AGTTATATGG GAAAGGTCAA GCTGACCACG TTGTTAGCTT TACCAAAGTC GATAAGTCTC CAACATTGTT TTCAACTTTA GACGAAAACG GATTCGCTAA GGATATTGCA GGATTAGGTG GCAGTTATCG TCGTCAAGAT GAGAAAACAC TCTACTATCC TAATGGAGCG ATTTATATTT CTTCTAAGCA GGCTTATTTA GCGGATAAAA CTTATTTTTC TGAAAAACA GCGGCCTATG TGATGACGAA GGAAGATTCG ATTGATGTAG ATGATCACTT TGATTTACT GGTGTTATTG GTCGAATTTA CTTTGATTAC CAGCGTCGTG AGCAACAAAA CAAACCATTT TATAAAAGAG AGTTAAAGCG TTTATGTGAG CAACGAGTCC ATGATAGTCT TGTGATTGGC GATAGTCGTC TGTTAGCCTT GTTACTGGAT GGTTTCGATA ATATCAGCAT CGGTGGGATG ACAGCTTCGA CAGCACTTGA AMACCAAGGT CTCTTTTGG CTACTCCGAT AAAGAAAGTT TTGCTTTCTC TTGGTGTGAA TGATTTGATT ACTGACTATC CCTTGCATAT GATTGAGGAT ACTATTCGCC AGCTGATGGA AAGTCTTGTT TCCAAAGCAG AGCAGGTTTT TGTGACGACG ATTGCCTACA CGCTGTTTCG TGATAGCGTT TCCAATGAAG AAATTGTGCA GCTGAATGAC GTTATTGTTC AGTCAGCAAG TGAACTGGGT ATTTCAGTGA TTGATCTAAA TGAAGTTGTT GAAAAAGAGG CGATGCTTGA CTATCAGTAT ACCAATGATG GATTGCATTT CAATCAGATT GGACAAGAGC GTGTGAATCA GCTGATTTTG ACAAGTTTGA CAAGATAATT TGGTGATAGA AGCTATTTCA GTGGCTAGAC TATGTTGGTA TGTGTTTTAG AGCCCAGGAA TAACATCTGT AGAGGATGCT AGCCTTGAGA ATTGACAACC ATTTAGTTGT TTTAATTATA TAAGGGGACC TCTAAAAACT CCCTAAATTT CCCAAAAATG AGATAATAGA ATAAAAAGTA ATGAGGAGAG CTGTCATGCA TTTATTCACA GACGATGAAA AAATCTTGTC AAAACTATCA GAGAAAGGCA ATCCCTTAGA ACGTTTGGAT GCCGTTATGG ATTGGAATAT CTTTCTTCCA TTGTTGTCAG AGTTATTCAG TCGTAAAGAT AAAGTCATCA GTCGTGGCGG TCGTCCTCAC CTAGACTATC TCATGATGTT CAAAGCGCTC TTGCTTCAAC GTCTTCATAA CCTATCTGAC GATGCCATGG AATATCAACT GCTGGATCGT ATATCTTTTC GTCGTTTTGT TGGTTGTCAT GAAGACACTG TTCCCGATGC GAAAACTATC TGGCTCTATC GTGAGAAATT AACCAAGTCA GGTCGTGAAA AGGAGTTGTT CGATTTGTTC TATGCCCATC TCACAGATGA AGGGGTGATT GCCCATTCAG GTCAGATTGT GGATGCTACC TTTGTCGAAT GCCCTAAACA ACGCAATTCA CGTGAGGACA ATCAGAAAAT CAAAACTTAT CGAAAATTAT GAGGTCACAA CAGCTAGTGT ACACGACTCC AATGTCCTAG CTCCTCTTTG TGATGCCAAT GAAGCGGTTT TTGATGACAG TGCTTATGTT GGAAAATCAG TACCAGAAGG TTGTCGCCAC CACACGATTC GTCGTGCTTT TAGAAATAAA CCGTTGACTG AGACTGATAA GGTCATTAAT CGACATATTA CCAAAGTCCG TTGTCGCGTT GAGCATGGTT TTGGCTTCAT TGAAACTAAC ATGAAAGGTA ACATCTGTCG AGCAATTGGG AAGGCACGAG CTGAAACCAA TGTGACCTTA ACCAACCTGC TCTACAATAT CTGTCGTTTT GAGCAAATCA AACGACTGGG ATTACCATCC GTGGGCTTAG TGCGCCCAAA AAATAGGAAA ATAAGCAAAA AGAGGCTGGG CAAAAACTAG TTTCTCACAA TAAAAAAACG GCTCTTTGTC AACTGTAGTG GGTAGACGAA AAGCTAACAC CTAGAGAGGA CGAAATTCGT TCTCTCATTT TTGATGTTTA AAGCGTAACC GCCTAATAAC AAGGTATCTA TCCAATCACA CATTCCTCCA TTATATAGTT AAATGAAACA AAAACAGTAC ATCTATGATA TAATGTATTT ATGGCATATT CATTAGATTT TCGTAAAAAA GTTCTCGCAT ACTGTGAGAA AACCGGCAGT ATTACTGAAG CATCAGCTAT TTTCCAAGTT TCACGTAACA CTATCTATCA ATGGCTAAAA TTAAAAGAGA AAACCGGCGA GCTTCATCAC CAAGTTAAAG GAACCAAGCC AAGAAAAGTG GATAGAGATA AATTAAAGAA TTATCTTGAA ACTCATCCAG ATGCTTATTT GACTGAAATA GCTTCTGAAT TTGACTGTCA TCCAACAGCT ATTCATTACC CCCTCAAAGC TATGGGATAT ACTCGAAAAA AAAGAGCTGT ACCTACTATG AACAAGACCC TGAAAAAGTA GAACTGTTCC TTAAAGAATT GAATAACTTA AGCCACTTGA CTCCTGTTTA TATTGACGAG ACAGGGTTTG AGACATATTT TCATCGAAAA TATGGTCGCT CTTTGAAAGG TCAGTTGATA AAAGGTAAGG TCTCTGGAAG AAGATACCAG CGGATATCTT TAGTAGCAGG TCTCATAAAT GGTGCGCTTA TAGCCCCGAT GACATACAAA GATACTATGA CGAGTGGCTT TTTCGAAGCT T

Fig. 3 cont.

SLDIDHMMEVMEASKSAAGSACPSPQAYQAAFEGAENIIVVTITGGLSGSFNAARVARDM YIEEHPNVNIHLIDSLSASGEMDLLVHQINRLISAGLDFPQVVEAITHYREHSKLLFVLA KVDNLVKNGRLSKLVGTVVGLLNIRMVGEASAEGKLELLQKARGHKKSVTAAFEEMKKAG YDGGRIVMAHRNNAKFFQQFSELVKASFPTAVIDEVATSGLCSFYAEEGGLLMGYEVKA

Fig. 3 cont.

ORF2Z

12/59
MKKYQVIIQDILTGIEEHRFKRGEKLPSIRQLREQYHCSKDTVQKAMLELKYQNKIYAVE
KSGYYILEDRDFQDHTCRAQSYRLSRITYEDFRICLKESLIGRENYLFNYYHQQEGLAEL
ISSVQSLLMDYHVYTKKDQLVITAGSQQALYILTQMETLAGKTEILIENPTYSRMIELIR
HQGIPYQTIERNLDGIDLEELESIFQTGKIKFFYTIPRLHNPLGSTYDIATKTAIVKLAK
QYDVYIIEDDYLADFDSSHSLPLHYLDTDNRVIYIKSFTPTLFPALRIGAISLPNQLRDI
FIKHKSLIDYDTNLIMQKALSLYIDNGMFARNTQHLHHIYHAQWNKIKDCLEKYALNIFY
RIPKGSVTFQLSKGILSPSIQHMFGKCYYFSGQKADFLQIFFEQDFADKLEQFVRYLNE

Fig. 3 cont.

ORF2Y

13/59 MKIII PNAKEVNTNLENASFYLLSDRSKPVLDAISQFDVKKMAAFYKLNEAKAELEADRW YRIRTGQAKTYPAWQLYDGLMYRYMDRRGIDSKEENYLRDHVRVATALYGLIHPFEFISP ${\tt HRLDFQGSLKIGNQSLKQYWRPYYDQEVGDDELILSLASSEFEQVFSPQIQKRLVKILFM}$ EEKAGQLKVHSTISKKGRGRLLSWLAKNNIQELSDIQDFKVDGFEYCTSESTANQLTFXR SIKM

Fig. 3 cont.

ORF2X

MKKRSGRSKSSKFKLVNFALLGLYSITLCLFLVTMYRYNILDFRYLNYIVTLLLVGVAVL AGLLMWRKKARIFTALLLVFSLVITSVGIYGMQEVVKFSTRLNSNSTFSEYEMSILVPAN SDITDVRQLTSILAPAEYDQDNITALLDDISKMESTQLATSPGTSYLTAYQSMLNGESQA MVFNGVFTNILENEDPGFSSKVKKIYSFKVTQTVETATKQVSGDSFNIYISGIDAYGPIS TVSRSDVNIIMTVNRATHKILLTTTPRDSYVAFADGGQNQYDKLTHAGIYGVNASVHTLE NFYGIDISNYVRLNFISFLQLIDLVGGIDVYNDQEFTSLHGNYHFPVGQVHLNSDQALGF VRERYSLTGGDNDRGKNQEKVIAALIKKMSTPENLKNYQAILSGLEGSIQTDLSLETIMS LVNTQLESGTQFTVESQALTGTGRSDLSSYAMPGSQLYMMEINQDSLEQSKAAIQSVLVE

Fig. 3 cont.

CPS2A

15/59 MNNQEVNAIEIDVLFLLKTIWRKKFLILLTAVLTAGLAFVYSSFLVTPQYDSTTRIYVVS QNVEAGAGLTNQELQAGTYLAKDYREIILSQDVLTQVATELNLKESLKEKISVSIPVDTR IVSISVRDADPNEAARIANSLRTFAVQKVVEVTKVSDVTTLEEAVPAEEPTTPNTKRNIL LGLLAGGILATGLVLVMEVLDDRVKRPQDIEEVMGLTLLGIVPDSKKLK

Fig. 3 cont.

CPS2B

MAMLEIARTKREGVNKTEEYFNAIRTNIQLSGADIKVVGITSVKSNEGKSTTAASLAIAY ARSGYKTVLVDADIRNSVMPGFFKPITKITGLTDYLAGTTDLSQGLCDTDIPNLTVIESG KVSPNPTALLQSKNFENLLATLRRYYDYVIVDCPPLGLVIDAAIIAQKCDAMVAVVEAGN VKCSSLKKVKEQLEQTGTPFLGVILNKYDIATEKYSEYGNYGKKA

Fig. 3 cont.

CPS2C

MIDIHSHIIFGVDDGPKTIEESLSLISEAYRQGVRYIVATSHRRKGMFETPEKIIMINFL QLKEAVAEVYPEIRLCYGAELYYSKDILSKLEKKKVPTLNGSCYILLEFSTDTPWKEIQE AVNEMTLLGLTPVLAHIERYDALAFQSERVEKLIDKGCYTQVNSNHVLKPALIGERAKEF KKRTRYFLEQDLVHCVASDMHNLYSRPPFMREAYQLVKKEYGEDRAKALFKKNPLLILKN QVQ

Fig. 3 cont.

CPS2D

MNIEIGYRQTKLALFDMIAVTISAILTSHIPNADLNRSGIFIIMMVHYFAFFISRMPVEF EYRGNLIEFEKTFNYSIIFVIFLMAVSFMLENNFALSRRGAVYFTLINFVLVYLFNVIIK QFKDSFLFSTTYQKKTILITTAELWENMQVLFESDILFQKNLVALVILGTEIDKINLPLP LYYSVEEAIGFSTREVVDYVFINLPSEYFDLKQLVSDFELLGIDVGVDINSFGFTVLKNK KIQMLGDHSIVTFSTNFYKPSHIWMKRLLDILGAVVGLIISGIVSILLIPIIRRDGGPAI FAQKRVGQNGRIFTFYKFRSMFVDAEVRKKELMAQNQMQGGMFKMDNDPRITPIGHFIRK TSLDELPQFYNVLIGDMSLVGTRPPTVDEFEKYTPSQKRRLSFKPGITGLWQVSGRSDIT DFNEVVRLDLTYIDNWTIWSDIKILLKTVKVVLLREGGQ

Fig. 3 cont.

CPS2E

MRTVYIIGSKGIPAKYGGFETFVEKLTEYQKDKSINYFVACTRENSAKSDITGEVFEHNG ATCFNIDVPNIGSAKAILYDIMALKKSIEIAKDRNDTSPIFYILACRIGPFIYLFKKQIE SIGGQLFVNPDGHEWLREKWSYPVRQYWKFSESLMLKYADLLICDSKNIEKYIHEDYRKY APETSYIAYGTDLDKSRLSPTDSVVREWYKEKEISENDYYLVVGRFVPENNYEVMIREFM KSYSRKDFVLITNVEHNSFYEKLKKETGFDKDKRIKFVGTVYNQELLKYIRENAFAYFHG HEVGGTNPSLLEALSSTKLNLLLDVGFNREVGEEGAKYWNKDNLHRVIDSCEQLSQEQIN DMDSLSTKQVKERFSWDFIVDEYEKLFKG

Fig. 3 cont.

CPS2F

MKKILYLHAGAELYGADKVLLELIKGLDKNEFEAHVILPNDGVLVPALREVGAQVEVINY PILRRKYFNPKGIFDYFISYHHYSKQIAQYATENKVDIIHNNTTAVLEGIYLKRKLKLPL LWHVHEIIVKPKFISDSINFLMGRFADKIVTVSQAVANHIKQSPHIKDDQISVIYNGVDN KVFYQSDARSVRERFDIDEEALVIGMVGRVNAWKGQGDFLEAVAPILEQNPKAIAFIAGS AFEGEEWRVVELEKKISQLKVSSQVXRMDYYANTTELYNMFDIFVLPSTNPDPLPTVVLK AMACGKPVVGYRHGGVCEMVKEGVNGFLVTPNSPLNLSKVILQLSENINLRKKIGNNSIE RQKEHFSLKSYVKNFSKVYTSLKVY

Fig. 3 cont.

CPS2G

MKIISFTMVNNESEIIESFIRYNYNFIDEMVIIDNGCTDNTMQIIFNLIKEGYKISVYDE SLEAYNQYRLDNKYLTKIIAEKNPDLIIPLDADEFLTADSNPRKLLEQLDLEKIHYVNWQ WFVMTKKDDINDSFIPRRMQYCFEKPVWHHSDGKPVTKCIISAKYYKKMNLKLSMGHHTV FGNPNVRIEHHNDLKFAHYRAISQEQLIYKTICYTIRDIATMENNIETAQRTNQMALIES GVDMWETAREASYSGYDCNVIHAPIDLSFCKENIVIKYNELSRETVAERVMKTGREMAVR AYNVERKQKEKKFLKPIIFVLDGLKGDEYIHPNPSNHLTILTEMYNVRGLLTDNHQIKFL KVNYRLIITPDFAKFLPHEFIVVPDTXDIEQVKSQYVGTGVDLSKIISLKEYRKEIGFIG NLYALLGFVPNMLNRIYLYIQRNGIANTIIKIKSRL.

Fig. 3 cont.

CPS2H

MQADRRKTFGKMRIRINNLFFVAIAFMGIIISNSQVVLAIGKASVIQYLSYLVLILCIVN DLLKNNKHIVVYKLGYLFLIIFLFTIGICQQILPITTKIYLSISMMIISVLATLPISLIK DIDDFRRISNHLLFALFITSILGIKMGATMFTGAVEGIGFSQGFNGGLTHKNFFGITILM GFVLTYLAYKYGSYKRTDRFILGLELFLILISNTRSVYLILLLFLFLVNLDKIKIEQRQW STLKYISMLFCAIFLYYFFGFLITHSDSYAHRVNGLINFFEYYRNDWFHLMFGAADLAYG DLTLDYAIRVRRVLGWNGTLEMPLLSIMLKNGFIGLVGYGIVLYKLYRNVRILKTDNIKT IGKSVFIIVVLSATVENYIVNLSFVFMPICFCLLNSISTMESTINKQLQT

Fig. 3 cont.

CPS2I

MEKVSIIVPIFNTEKYLRECLDSIISQSYTNLEILLIDDGSSDSSTDICLEYAEQDGRIK LFRLPNGGVSNARNYGIKNSTANYIMFVDSDDIVDGNIVESLYTCLKENDSDLSGGLLAT FDGNYQESELQKCQIDLEEIKEVRDLGNENFPNHYMSGIFNSPCCKLYKNIYINQGFDTE QWLGEDLLFNLNYLKNIKKVRYVNRNLYFARRSLQSTTNTFKYDVFIQLENLEEKTFDLF VKIFGGQYEFSVFKETLQWHIIYYSLLMFKNGDESLPKKLHIFKYLYNRHSLDTLSIKRT SSVFKRICKLIVANNLFKIFLNTLIREEKNND

Fig. 3 cont.

CPS2J

MINISIIVPI YNVEQYLSKC INSIVNQTYK HIEILLVNDG STDNSEEICL AYAKKDSRIR YFKKENGGLS DARNYGISRA KGDYLAFIDS DDFIHSEFIQ RLHEAIEREN ALVAVAGYDR VDASGHFLTA EPLPTNQAVL SGRNVCKKLL EADGHRFVVA WNKLYKKELF EDFRFEKGKI HEDEYFTYRL LYELEKVAIV KECLYYYVDR ENSIITSSMT DHRFHCLLEF QNERMDFYES RGDKELLLEC YRSFLAFAVL FLGKYNHWLS KQQKKLLQTL FRIVYKQLKQ NKRLALLMNA YYLVGCLHLN FSVFLKTGKD KIQERLRRSE SSTR

Fig. 3 cont.

CPS2K

LVYTIGTILV	QGLAFITLPI	YTRVISQEVY	GQFSLYNSWV	GLVGLFIGLQ
HFREKFDDFV	STLMVSSIAF	FLPIFGLSFL	LSQPLSLLFG	
LQSLMIVVQG	FFTTYLVQRQ	QSMWTLPLSV	LSAVINTALS	LFLTFPMEND
TTGVLACVSX	WFSOKKNGLH	FRKDYLRYGL	SISIPLIFHG	
RIMLGKMLTL	SDVALYSFGY	TLASILQIVF	SSLNTVWCPW	YFEKKRGADK
AIGLFVTFGF	LTIYPELAML	LGGSEYRFSM	GFIPMIIVGV	
NIQFYSGNTK	FLPIGTFIAG	VLNISVHFVL	IPTKNLWCCF	ATTASYLLLL
		YTGLMTVFVG	SIWIRWSLGI	
RKELTVALNT	FREKRSK			
	HFREKFDDFV LQSLMIVVQG TTGVLACVSX RIMLGKMLTL AIGLFVTFGF NIQFYSGNTK YAYDEVAIST	HFREKFDDFV STLMVSSIAF LQSLMIVVQG FFTTYLVQRQ TTGVLACVSX WFSQKKNGLH RIMLGKMLTL SDVALYSFGY AIGLFVTFGF LTIYPELAML NIOFYSGNTK FLPIGTFIAG	HFREKFDDFV STLMVSSIAF FLPIFGLSFL LQSLMIVVQG FFTTYLVQRQ QSMWTLPLSV TTGVLACVSX WFSQKKNGLH FRKDYLRYGL RIMLGKMLTL SDVALYSFGY TLASILQIVF AIGLFVTFGF LTIYPELAML LGGSEYRFSM NIQFYSGNTK FLPIGTFIAG VLNISVHFVL YAYDEVAIST FVKVIALVVV YTGLMTVFVG	LVYTIGTILV QGLAFITLPI YTRVISQEVY GQFSLYNSWV HFREKFDDFV STLMVSSIAF FLPIFGLSFL LSQPLSLLFG LQSLMIVVQG FFTTYLVQRQ QSMWTLPLSV LSAVINTALS TTGVLACVSX WFSQKKNGLH FRKDYLRYGL SISIPLIFHG RIMLGKMLTL SDVALYSFGY TLASILQIVF SSLNTVWCPW AIGLFVTFGF LTIYPELAML LGGSEYRFSM GFIPMIIVGV NIQFYSGNTK FLPIGTFIAG VLNISVHFVL IPTKNLWCCF YAYDEVAIST FVKVIALVVV YTGLMTVFVG SIWIRWSLGI RKELTVALNT FREKRSK

Fig. 3 cont.

CPS20

MVYIIAEIGC	NHNGDVHLAR	KMVEVAVDCG	VDAVKFQTFK	ADLLISKYAP	KAEYQKITTG
ESDSOLEMTR	RLELSFEEYL	DLRDYCLEKG	VDVFSTPFDE	ESLDFLISTD	
MPVYKIPSGE	ITNLPYLEKI	GRQAKKVILS	TGMAVMDEIH	QAVKILQENG	TTDISILHCT
TEYPTPYPAL	NLNVLHTLKK	EFPNLTIGYS	DHSVGSEVPI	AAAAMGAELI	
EKHFTLDNEM					RNKIVARKSI
VAKKAIAKGE					
			_		
HSAFENOM					

Fig. 3 cont.

CPS2P

MKKICFVTGS RAEYGIMRRL LSYLQDDPEM ELDLVVTAMH LEEKYGMTVK DIEADKRRIV KRIPLHLTDT SKQTIVKSLA TLTEQLTVLF EEVQYDLVLI LGDRYEMLPV ANAALLYNIP ICHIHGGEKT MGNFDESIRH AITKMSHLHL TSTDEFRNRV IQLGENPTMY

Fig. 3 cont.

CPS2Q

ment group, they make the colored at the colored at

MELGIDFAED YYVVLFHPVT LEDNTAEEQT QALLDALKED GSQCLIIGSN SDTHADKIME LMHEFVKQDS DSYIFTSLPT RYYHSLVKHS QGLIGNSSSG LIEVPSLQVP TLNIGNRQFG RLSGPSVVHV GTSKEAIVGG LGQLRDVIDF TNPFEQPDSA LQGYRAIKEF LSVQASTMKE FYDR

Fig. 3 cont.

CPS2R

with the state of the state of

MKKVAFLGAG TFSDGVLPWL DRTRYELIGY FEDKPISDYR GYPVFGPLQD VLTYLDDGKV DAVFVTIGDN VKRKEIFDLL AKDHYDALFN IISEQANIFS PDSIKGRGVF IGFSSFVGAD SYVYDNCIIN TGAIVEHHTT VEAHCNITPG VTINGLCRIG ESTYIGSGST VIQCIEIAPY TTLGAGTVVL KSLTESGTYV GVPARKIK

Fig. 3 cont.

CPS2S

hands for article for the party of the party

ž., ž

MEPICLIPAR	SGSKGLPNKN	MLFLDGVPMI	FHTIRAAIES	GCFKKENIYV	STDSEVYKEI
CETTGVQVLM					
GKHVKEAMEL	YGKGQADHVV	SFTKVDKSPT	LFSTLDENGF	AKDIAGLGGS	YRRQDEKTLY
YPNGAIYISS	KQAYLADKTY	FSEKTAAYVM	TKEDSIDVDD	HFDFTGVIGR	
IYFDYQRREQ	QNKPFYKREL	KRLCEQRVHD	SLVIGDSRLL	ALLLDGFDNI	SIGGMTASTA
LENGGLFLAT					
VFVTTIAYTL	FRDSVSNEEI	VQLNDVIVQS	ASELGISVID	LNEVVEKEAM	LDYQYTNDGL
HFNQIGQERV	NQLILTSLTR				

Fig. 3 cont.

CPS2T

31/59 ATCGCCAAAC GAAATTGGCA TTATTTGATA TGATAGCAGT TGCAATTTCT GCAATCTTAA CAAGTCATAT ACCAAATGCT GATTTAAATC GTTCTGGAAT TTTTATCATA ATGATGGTTC ATTATTTTGC ATTTTTTATA TCTCGTATGC CAGTTGAATT TGAGTATAGA GGTAATCTGA TAGAGTTTGA AAAAACATTT AACTATAGTA TAATATTTGC AATTTTCTT ACGGCAGTAT CATTTTGTT GGAGAATAAT TTCGCACTTT CAAGACGTGG TGCCGTGTAT TTCACATTAA TAAACTTCGT TTTGGTATAC CTATTTAACG TAATTATTAA GCAGTTTAAG GATAGCTTTC TATTTTCGAC AATCTATCAA AAAAAGACGA TTCTAATTAC AACGGCTGAA CGATGGGAAA ATATGCAAGT TTTATTTGAA TCACATAAAC AAATTCAAAA AAATCTTGTT GCATTGGTAG TTTTAGGTAC AGAAATAGAT AAAATTAATT TATCATTACC GCTCTATTAT TCTGTGGAAG AAGCTATAGA GTTTTCAACA AGGGAAGTGG TCGACCACGT CTTTATAAAT CTACCAAGTG AGTTTTTAGA CGTAAAGCAA TTCGTTTCAG ATTTTGAGTT GTTAGGTATT GATGTAAGCG TTGATATTAA TTCATTCGGT TTTACTGCGT TGAAAAACAA AAAAATCCAA CTGCTAGGTG ACCATAGCAT TGTAACTTTT TCCACAAATT TTTATAAGCC TAGTCATATC ATGATGAAAC GACTTTTGGA TATACTCGGA GCGGTAGTCG GGTTAATTAT TTGTGGTATA GTTTCTATTT TGTTAGTTCC AATTATTCGT AGAGATGGTG GACCGGCTAT TTTTGCTCAG AAACGAGTTG GACAGAATGG ACGCATATTT ACATTCTACA AGTTTCGATC GATGTATGTT GATGCTGAGG AGCGCAAAAA AGACTTGCTC AGCCAAAACC AGATGCAAGG GTGGGTATGT TTTAAAATGG GAAAAACGAT CCTAGAATTA CTCCAATTGG ACATTTCATA CGCAAAAACA AGTTTAGACG AGTTACCACA GTTTTATAAT GTTTTAATTG GCGATATGAG TCTAGTTGGT ACACGTCCAC CTACAGTTGA TGAATTTGAA AAATATACTC CTGGTCAAAA GAGACGATTG AGTTTTAAAC CAGGGATTAC AGGTCTCTGG CAGGTTAGTG GTCGTAGTAA TATCACAGAC TTCGACGACG TAGTTCGGTT GGACTTAGCA TACATTGATA ATTGGACTAT CTGGTCAGAT ATTAAAATTT CGGTTCTTCA GGGGGACATT TGACTCACTT GTATTTGTTA AAACCGTTTT GGAAGGAAGA AGAACGTTTT TGGGTAACAT TTGATAAAGA GGATGCAAGA AGTCTTTTGA AGAATGAAAA AATGTATCCA TGTTACTTTC CAACAAATCG CAATCTCATT AATTTAGTGA AAAATACTTT CTTAGCTTTC AAAATTTTAC GTGATGAGAA ACCAGATGTT ATTATTCAT CTGGTGCGGC CGTTGCTGTC CCCTTCTTTT ACATCGGAAA ACTATTTGGA GCAAAGACGA TTTATATTGA AGTATTTGAT CGAGTTAATA AATCTACATT AACTGGAAAA CTAGTTTATC CCGTAACAGA TATTTTTATT GTTCAGTGGG AAGAAATGAA GAAGGTATAT CCTAAATCTA TTAACTTGGG GAGTATTTTT TAATGATTTT TGTAACAGTA GGAACTCATG AACAACAGTT TAATCGATTG ATAAAAGAGA TTGATTTATT GAAAAAAAT GGAAGTATAA CCGACGAAAT ATTTATTCAA ACAGGATATT CTGACTATAT TCCAGAATAT TGCAAGTATA AAAAATTTCT CAGTTACAAA GAAATGGAAC AATATATTAA CAAATCAGAA GTAGTTATTT GCCACGGAGG CCCCGCTACT TTTATGAATT CATTATCCAA AGGAAAAAA CAATTATTGT TTCCTAGACA AAAAAAGTAT GGTGAACATG TAAATGATCA TCAAGTAGAG TTTGTAAGAA GAATTTTACA AGATAATAAT ATTTTATTTA TAGAAAATAT AGATGATTTG TTTGAAAAA TTATTGAAGT TTCTAAGCAA ACTAACTTTA CATCAAATAA TAATTTTTTT TGTGAAAGAT TAAAACAAAT AGTTGAAAAA TTTAATGAGG ATCAAGAAAA TGAATAATAA AAAAGATGCA TATTTGATAA TGGCTTATCA TAATTTTTCT CAGATTTTAC TGGAGAGGGA TACAGATATT ATCATCTTCT CTCAGGAGAA TGCACACCAT TAGTTCCTTC AGAATACCTG TATAATTATT TTAAATATTC TCAGGATTTA TATGTTGAAT TTACAAAAGA TGAGCAAAAA TATAAAGAAA ATAGGATATA TGAACGAGTT AAATGTTACA GATTATTTCC TAATATATCA GAAAAAACTA TTGATAATGT ACTGTTTAGA ATTTTATTAA GAATGTATCG AGCTTTTGAA TACTATTTAC AAAGATTGTT GTTTATTGAT AGAATAAAA ACATGGTCTA AGAATAAGAT TTGGTTCTAA TTGGGTTTCG CTTCCACATG ATTTTGTGGC AATTCTTTTA TCAAATGAAA ACGAAACAGC TTATTTATTT AAGTAATCTA AATGTCCAGA TGAACTATTT ATACAGACAA TTATAGAAAA ATATGAATTT TCAAATAGAT TATCTAAATA TGGAAATTTA AGATATATAA AGTGGAAAAA ATCAACATCT TCTCCTATTG TCTTTACAGA TGATTCTATT GATGAATTGC TAAATGCAAG AAATTTAGGT TTTTTATTTG CTAGAAAGTT AAAAATAGAA TAAATTATTT AAATATGACC CGGAATATTT TATTTTTAAG TACTTCTGGT TGATTATTT TATTCCAGAG CAAAAGTATG TATTTTTATT AATTTTTATG AATTTAATTT TATTTCATAT AAAATTTTTG AAAACTAAGC TAATATTAAA AAATGAAATT TTATTGTTTT TATTATGGTC TATATTATGT TTTGTTTCAG TAGTCACAAG TATGTTTGTT GAAATAAATT TTGAAAGATT ATTTGCAGAT TTTACTGCTC CCATAATTIG GATTATIGCA ATAATGTATI ATAATTIGTA TICATITTATA AATATIGATI ATAAAAAATT AAAAAATAGT ATCTTTTTTA GTTTTTTTAGT TTTATTAGGT ATATCTGCAT TGTATATTAT TCAAAATGGG AAAGATATTG TATTTTTAGA CAGACACCTT ATAGGACTAG ACTATCTTAT AACAGGCGTC AAAACAAGGT TGGTTGGCTT TATGAACTAT CCTACGTTAA ATACCACTAC AATTATAGTT TCAATTCCGT TAATCTTTGC ACTTATAAAA AATAAAATGC AACAATTTTT TTTCTTGTGT CTTGCTTTTA

·			
TACCGATCTA TTTAAGTGGA TCGAGAATTG GTAGTTTATC	GCTAGCAATA	TTAATTATAT	GCTTGTTATG
GAGATATATA GGTGGAAAAT TTGCTTGGAT AAAAAAGCTA	<i>j</i>		
ATAGTAATAT TTGTAATACT ACTTATTATT TTAAATACTO	AATTGCTTTA	CCATGAAATT	TTGGCTGTTT
ATAATTCTAG AGAATCAAGT AACGAAGCTA GATTTATTAT	ľ		
TTATCAAGGA AGTATTGATA AAGTATTAGA AAACAATAT	TTATTTGGAT	ATGGAATATC	CGAATATTCA
CHERCEGEAR CTTGGCTCGG AAGTCATTCA GGCTATATAT	ľ		
CATTTTTTA TAAATCAGGA ATAGTTGGGT TGATTTTACT	CATGTTTTCT	TTTTTTTATG	AAAAATATT
TROMBRUCCA CTTAATCGGG AAACAGCACT ATTTTATTT	•		
ACATCATTAG CCATATTTT CATATATGAA ACAATAGAT	CGATTATTAT	TATATTAGTA	CTATTCTTTT
CONCLARAGE TATTTGGAAT AATATAAATT TTAAAAAGG	4		
TATGGAGACA AAAAATGAAT GATTTAATTT CAGTTATTG	ACCAATTTAT	AATGTCCAAG	ATTATCTTGA
TARRETARY ARCACTATTA TTARCCAARC ATATACTAA	•		
TTAGAGGTTA TTCTCGTAAA TGATGGAAGT ACTGATGAT	CTGAGAAAAT	TTGCTTAAAC	TATATGAAGA
ACGATGGAAG AATTAAATAT TACAAGAAAA TTAATGGCGG	2		
TCTAGCAGAT GCTCGAAATT TCGGACTAGA ACATGCAACA	CCTABATATA	TTGCTTTTGT	CGATTCTGAT
GACTATATAG AAGTTGCAAT GTTCGAGAGA ATGCATGATA	, 001111111111		
GACTATATAG AAGIIGCAAT GIICGAGAGA AIGCAIGAITA ATATAACTGA GTATAATGCC GATATAGCAG AGATAGATTI	" ጥጥርጥጥጥአርጥ <u>አ</u>	CACCAAAACC	CCTATACAAA
ATATACTGA GTATAATGCC GATATAGCAG AGATAGATT	ligitingin	GACGAMACG	GGININOMA
GAAAAAAGA AATAGTAATT TTCATGTCTT AACGAGAGA GAGACTGTAA AAGAATTTTT GTCAGGATCT AATATAGAAA	ኔ . አመአአመሮጥጥጥሮ	CTCCNACCTT	ምስምምርክርር ክር
GAGACTGTAA AAGAATTTTT GTCAGGATCT AATATAGAAA	, WIWWIGILIG	GIGCHAGCII	INIICACGAG
ATATTATAAA AGATATAAAA TTCCAAATTA ATAATAGAAG	; , ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	CTCTT CTT CTT	ボ ぐ カ ボ カ ぐ か か へ か
TATTGGTGAG GATTTGCTTT TTAATTTGGA GGTCTTGAAC	AATGTAACAC	GIGIAGIAGI	TGATACTAGA
GAATATTATT ATAATTATGT CATTCGTAAC AGTTCGCTTA		3 3 000 3 CCCCC	mm > 2 Cmm > 3 >
TTAATCAGAA ATTCTCTATA AATAATATTG ATTTAGTCAC	: AAGATTGGAG	AATTACCCCT	TTAAGTTAAA
AAGAGAGTTT AGTCATTATT TTGATGCAAA AGTTATTAAA			001100000
GAGAAGGTTA AATGTTTAAA CAAAATGTAT TCAACAGATT	GTTTGGATAA	TGAGTTCTTG	CCAATATTAG
AGTCTTATCG AAAAGAAATA CGTAGATATC CATTTATTAA	\ 		
AGCGAAAAGA TATTTATCAA GAAAGCATTT AGTTACGTTG	TATTTGATGA	AATTTTCGCC	TAAACTATAT
GTAATGTTAT ATAAGAAATT TCAAAAGCAG TAGAGGTAAA	·		
AATGGATAAA ATTAGTGTTA TTGTTCCAGT TTATAATGTA	GATAAATATT	TAAGTAGTTG	TATAGAAAGC
ארכי אור אוריים אוריים אוריים אוריים אינים אוריים	L		
TAGATGATGG CTCTGTAGAT GATTCTGCTA AAATATGCAA	GGAATATGCA	GAAAAAGATA	AAAGAGTAAA
TARREST ACTARTCATA GTGGAGTATC AAATGCTAGA	L		
ANTCATGGAA TAAAGCGGAG TACAGCTGAA TATATTATGT	TTGTTGACTC	TGATGATGTT	GTTGATAGTA
CARRACTACA AAAATTATAT TTTAATATTA TAAAAAGTAG			
AACTCATTTA TCTGGTTGTT TGTACGCTAC TTTTTCAGAA	ATATAAATA	ATTTTGAAGT	GAATAATCCA
AND TO THE AGENCY TANTACCETE CAGGACATES			
CACAAAAA TTTTATGAAT TTGTATATAA ATAATATTTT	TTCTACTCCT	GTTTGTAAAC	TATATAAGAA
PACAMACAMA ACAGAMETT TTCAAGAGAA TCAATGGTTA			
GGAGAAGATT TACTTTTTAA TCTGCATTAT TTAAAGAATA	TAGATAGAGT	TAGTTATTTG	ACTGAACATC
TAGGAGAGT ATACTAAGTA CAGTAAATTC			
TTTTDAAGAA GGTGTGTTTT TGCAATTGGA AAATTTGCAA	AAACAAGTGA	TAGTATTGTT	TAAGCAAATA
TARCONCACC ATTTTCACCT ATCAATTCTT AAAGATACTA			
TACCTTCCCA AGTATTTTAT TATACCTTAC TAATGTTTAA	ATACGGAAAA	CAGTCTATTT	TTGACAAATT
συν επιστρούστη απορούστης αποροάριας που το προσφορίο και συν συν και			
TTCTTADAG TATCTAACAA AAATTCTTTG TCTAAAAATT	TTTGTATAAG	AATTGTTTCG	AACAAAGTTT
TACTATTAGT AAAATTTCTA TAATTGTACC TATATATAAT	GTAGAAAAAT	ATTTATCTAA	ATGTATAGAT
POCESTROTE A POCESCOTA CARACATATA GAGATTCTTC			
TGGTGAATGA CGGTAGTACG GATAATTCGG AAGAAATTTG	TTTAGCATAT	GCGAAGAAAG	ATAGTCGCAT
mccmmammmm abbbbgaga ACGGCGGCT ATCAGATGCC			
CGTAATTATG GCATAAGTCG CGCCAAGGGT GACTACTTAG	CTTTTATAGA	CTCAGATGAT	TTTATTCATT
COCACHRONE CONDCETTA CACGNAGON TTGAGAGAGA			
GAATGCCCTT GTGGCAGTTG CTGGTTATGA TAGGGTAGAT	GCTTCGGGGC	ATTTCTTAAC	AGCAGAGCCG
GTAAAAAGCT GCTAGAGGCG GATGGTCATC GCTTTGTGGT	GGCCTGTAAT	AAACTCTATA	AAAAAGAACT
GATGAATACT TCACTTATCG CTTGCTCTAT GAGTTAGAAA	AAGTTGCAAT	AGTTAAGGAG	TGCTTGTACT
TOTAL TOTAL CONTRACTOR ACTIVITIES OF THE TOTAL CONTRACTOR OF THE TOTAL CONTRAC			
GACTGACCAT CGCTTCCATT GCCTACTGGA ATTTCAAAAT	GAACGAATGG	ACTTCTATGA	AAGTAGAGGA
GACTGACCAT CGCTTCCATT GCCTACTGGA ATTTCAAAAT GATAAAGAGC TCTTACTAGA GTGTTATCGT TCATTTTTAG	~121001X1X00		
GATAAAGAGC TCTTACTAGA GIGITATCGI ICAIIIITAG CCTTTGCTGT TTTGTTTTTA GGCAAATATA ATCATTGGTT	CACCAAACAG	CAAAAGAAGC	TT
CCTTTGCTGT TTTGTTTTIN GGCAMAININ MICHIGGIT	GROCHMONG		

Fig. 4 cont.

ROTKLALFDM	IAVAISAILT	SHIPNADLNR	SGIFIIMMVH	YFAFFISRMP	VEFEYRGNLI
EFEKTENYSI	IFAIFLTAVS	FLLENNFALS	RRGAVYFTLI	NFVLVYLFNV	
IIKOFKDSFL	FSTIYQKKTI	LITTAERWEN	MQVLFESHKQ	IQKNLVALVV	LGTEIDKINL
SLPLYYSVEE	AIEFSTREVV	DHVFINLPSE	FLDVKQFVSD	FELLGIDVSV	
DINSEGETAL	KNKKIQLLGD	HSIVTFSTNF	YKPSHIMMKR	LLDILGAVVG	LIICGIVSIL
LVPIIRRDGG	PAIFAOKRVG	QNGRIFTFYK	FRSMYVDAEE	RKKDLLSQNQ	
MOGWVCFKMG	KTILELLQLD	ISYAKTSLDE	LPQFYNVLIG	DMSLVGTRPP	TVDEFEKYTP
GOKRRLSFKP	GITGLWQVSG	RSNITDFDDV	VRLDLAYIDN	WTIWSDIKIL	
I.KTVKVVLLR					

Fig. 4 cont.

CPS1E

MKVCLVGSSG GHLTHLYLLK PFWKEEERFW VTFDKEDARS LLKNEKMYPC YFPTNRNLIN LVKNTFLAFK ILRDEKPDVI ISSGAAVAVP FFYIGKLFGA KTIYIEVFDR VNKSTLTGKL VYPVTDIFIV QWEEMKKVYP KSINLGSIF

Fig. 4 cont.

CPS1F

ment share a second of the sec

MIFVTVGTHE QQFNRLIKEI DLLKKNGSIT DEIFIQTGYS DYIPEYCKYK KFLSYKEMEQ YINKSEVVIC HGGPATFMNS LSKGKKQLLF PRQKKYGEHV NDHQVEFVRR ILQDNNILFI ENIDDLFEKI IEVSKQTNFT SNNNFFCERL KQIVEKFNED QENE

Fig. 4 cont.

CPS1G

ment of the control o

		,			
MFKLFKYDPE	YFIFKYFWLI	IFIPEQKYVF	LLIFMNLILF	HIKFLKTKLI	LKNEILLFLL
WSILCFVSVV	TSMFVEINFE	RLFADFTAPI	IWIIAIMYYN	LYSFINIDYK	
KLKNSIFFSF	LVLLGISALY	IIQNGKDIVF	LDRHLIGLDY	LITGVKTRLV	GFMNYPTLNT
TTIIVSIPLI	FALIKNKMQQ	FFFLCLAFIP	IYLSGSRIGS	LSPLAILIIC	
LLWRYIGGKF	AWIKKLIVIF	VILLIILNTE	LLYHEILAVY	NSRESSNEAR	FIIYQGSIDK
VLENNILFGY					
IKKSYGVNGE	TALFYFTSLA	IFFIYETIDP	IIIILVLFFS	SIGIWNNINF	KKDMETKNE

Fig. 4 cont.

The state of the s

CPS1H

MNDLISVIVP					LNYMKNDGRI
KYYKKINGGL	ADARNFGLEH	ATGKYIAFVD	SDDYIEVAMF	ERMHDNITEY	
NADIAEIDFC					KLYSRDIIKD
IKFQINNRSI	GEDLLFNLEV	LNNVTRVVVD	TREYYYNYVI	RNSSLINQKF	
SINNIDLVTR	LENYPFKLKR	EFSHYFDAKV	IKEKVKCLNK	MYSTDCLDNE	FLPILESYRK
EIRRYPFIKA	KRYLSRKHLV	TLYLMKFSPK	LYVMLYKKFQ	KQ	

Fig. 4 cont.

netter deman der menn der print er meine Brode de deman der de deman der deman der der deman der deman der deman d

CPS1I

MDKISVIVPV	YNVDKYLSSC	IESIINQNYK	NIEILLIDDG	SVDDSAKICK	EYEKDKRVKI
FETNHSGVSN	ARNHGIKRST	AEYIMFVDSD	DVVDSRLVEK	LYFNIIKSRS	
DISCOLYATE	SENINNFEVN	NPNIDFEAIN	TVQDMGEKNF	MNLXXNNIFS	TPVCXLYQKR
VITDLEGENO	WLGEDLLFNL	HYLKNIDRVS	YLTEHLYFYR	RGILSTVNSF	
KEGVFLOLEN	LQKQVIVLFK	QIYGEDFDVS	IVKDTIRWQV	FYYSLLMFKY	GKQSIFDKFL
TERNLYKKYY	FNLLKVSNKN	SLSKNFCIRI	VSNKVFKKIL	WL	

Fig. 4 cont.

CPS1J

the first first part for given in the first firs

MDTISKISII	VPIYNVEKYL	SKCIDSIVNQ	TYKHIEILLV	ndgstdnsee	ICLÁYAKKDS
RIRYFKKENG					
RENALVAVAG	YDRVDASGHF	LTAEPLPTNQ	AVLSGRNVCK	KLLEADGHRF	VVACNKLYKK
ELFEDFRFEK	GKIHEDEYFT	YRLLYELEKV	AIVKECLYYY	VDRENSITTS	
SMTDHRFHCL	LEFQNERMDF	YESRGDKELL	LECYRSFLAF	AVLFLGKYNH	WLSKQQKK

Fig. 4 cont.

CPS1K

THE REST IN THE PARTY OF THE REST OF THE PARTY OF T

40/59 AAGCTTATCG TCAAGGTGTT CGCTATATCG TGGCGACATC TCATAGACGA AAAGGGATGT TTGAAACACC AGAAAAAGTT ATCATGACTA ACTTTCTTCA ATTTAAAGAC GCAGTAGCAG AAGTTTATCC TGAAATACGA TTGTGCTATG GTGCTGAATT GTATTATAGT AAAGATATAT TAAGCAAACT TGAAAAAAAG AAAGTACCCA CACTTAATGG CTCGCGCTAT ATTCTTTGG AGTTCAGTAG TGATACTCCT TGGAAAGAGA TTCAAGAAGC AGTGAACGAA GTGACGCTAC TTGGGCTAAC TCCCGTACTT GCCCATATAG AACGATATGA CGCCCTAGCG TTTCATGCAG AGAGAGTAGA AGAGTTAATT GACAAGGGAT GCTATACTCA GGTAAATAGT AATCATGTGC TGAAGCCCAC TTTAATTGGT GATCGAGCAA AAGAATTTAA AAAACGTACT CGGTATTTTT TAGAGCAGGA TTTAGTACAT TGTGTTGCTA GCGATATGCA TAATTTATCT AGTAGACCTC CGTTTATGAG GGAGGCTTAT AAGTTGCTAA CAGAGGAATT TGGCAAAGAT AAAGCGAAAG CGTTGCTAAA AAAGAATCCT CTTATGCTAT TAAAAAACCA GGCGATTTAA ACTGGTTACT CTAGATTGTG GAGAGAAAA TGGATTTAGG AACTGTTACT GATAAACTGT TAGAACGCAA CAGTAAACGA TTGATACTCG TGTGCATGGA TACGTGTCTT CTTATAGTTT CCATGATTTT GAGCAGACTG TTTTTGGATG TTATTATTGA CATACCAGAT GAACGCTTCA TTCTTGCAGT TTTATTCGTA TCAATTTTAT ATTTGATTCT ATCGTTTAGA TTAAAAGTCT TTTCATTAAT TACGCGTTAC ACAGGGTATC AGAGTTATGT AAAAATAGGA CTTAGTTTAA TATCTGCGCA TTCATTGTTT TTAATTATCT CAATGGTGTT GTGGCAGGCT TTTAGTTATC GTTTCATCTT AGTATCCTTA TTTTTGTCGT ATGTAATGCT CATTACTCCG AGGATTGTTT GGAAAGTCTT ACATGAGACG AGAAAAAATG CTATCCGTAA GAAGGATAGC CCACTAAGAA TCTTAGTAGT AGGTGCTGGA GATGGTGGTA ATATTTTTAT CAATACTGTC AAAGATCGAA AATTGAATTT TGAAATTGTC GGTATCGTTG ATCGTGATCC AAATAAACTT GGAACATTTA TCCGTACGGC TAAAGTTTTA GGAAACCGTA ATGATATTCC ACGACTGGTA GAGGAATTAG CTGTTGACCA AGTGACGATT GCCATCCCTT CTTTAAATGG TAAGGAGCGA GAGAAGATTG TTGAAATCTG TAACACTACA GGAGTGACCG TCAATAATAT GCCGAGTATT GAAGACATTA TGGCGGGGAA CATGTCTGTC AGTGCCTTTC AGGAAATTGA CGTAGCAGAC CTTCTTGGTC GACCAGAGGT TGTTTTGGAT CAGGATGAAT TGAATCAGTT TTTCCAAGGG AAAACAATCC TTGTCACAGG AGCAGGTGGC TCTATCGGTT CAGAGCTATG TCGTCAAATT GCTAAGTTTA CGCCTAAACG CTTGTTGTTG CTTGGACATG GAGAAAATTC AATCTATCTC ATTCATCGAG AGTTACTGGA AAAGTACCAA GGTAAGATTG AGTTGGTCCC TCTCATTGCA GATATTCAAG ATAGAGAATT GATTTTTAGC ATAATGGCTG AATATCAACC CGATGTTGTT TATCATGCTG CAGCACATAA GCATGTTCCT TTGATGGAAT ATAATCCACA TGAAGCAGTG AAGAATAATA TTTTTGGAAC GAAGAATGTG GCTGAGGCGG CTAAAACTGC AAAGGTTGCC AAATTTGTTA TGGTTTCAAC AGATAAAGCT GTTAATCCAC CAAATGTCAT GGGAGCGACT AAACGTGTTG CAGAAATGAT TGTTACAGGT TTAAACGAGC CAGGTCAGAC TCAATTTGCG GCAGTCCGGT TTGGGAATGT TCTAGGTAGT CGTGGAAGTG TTGTTCCGCT ATTCAAAGAG CAAATTAGAA AAGGTGGACC TGTTACGGTT ACCGACTTTA GGATGACTCG TTATTTCATG ACGATTCCTG AGGCAAGTCG TTTGGTTATC CAAGCTGGAC ATTTGGCAAA AGGTGGAGAA ATATTTGTCT TGGATATGGG CGAGCCAGTA CAAATCCTGG AATTGGCAAG AAAAGTTATC TTGTTAAGTG GACACAGA GGAAGAAATC GGGATTGTAG AATCTGGAAT CAGACCAGGC GAGAAACTCT ACGAGGAATT ATTATCAACA GAAGAACGTG TCAGCGAACA GATTCATGAA AAAATATTTG TGGGTCGCGT TACAAATAAG CAGTCGGACA TTGTCAATTC ATTTATCAAT GGATTACTCC AAAAAGATAG AAATGAATTA AAAAATATGT TGATTGAATT TGCAAAACAA GAATAAGAAA GTAAAAAATA TTTTTACTTT CCTAGAGTTT AAACGATGTT TAAGTTCTAG GAAGGTTAGA ATACCTAATT AACAACAATA TTACTATTTA TTAAGAGTCA GATAATAGCA ACTAAGTGCT ACAAACTATC TTTATAATAA GTATATTTGG TCAAAAGGGA GATGTGAAAT GTATCCAATT TGTAAACGTA TTTTAGCAAT TATTATCTCA GGGATTGCTA TTGTTGTTCT GAGTCCAATT TTATTATTGA TTGCATTGGC AATTAAATTA GATTCTAAAG GTCCGGTATT ATTTAAACAA AAGCGGGTTG GTAAAAACAA GTCATACTTT ATGATTTATA AATTCCGTTC TATGTACGTT GACGCACCAA GTGATATGCC GACTCATCTA TTAAAGGATC CTAAGGCGAT GATTACCAAG GTGGGCGCGT TTCTCAGAAA AACAAGTTTA GATGAACTGC CACAGCTTTT TAATATTTTT AAAGGTGAAA TGGCGATTGT TGGTCCACGC CCAGCCTTAT GGAATCAATA TGACTTAATT GAAGAGCGAG ATAAATATGG TGCAAATGAT ATTCGTCCTG GACTAACCGG TTGGGCTCAA ATTAATGGTC GTGATGAATT GGAAATTGAT GAAAAGTCAA AATTAGATGG ATATTATGTT CAAAATATGA GTCTAGGTTT GGATATTAAA TGTTTCTTAG GTACATTCCT CAGTGTAGCC AGAAGCGAAG GTGTTGTTGA AGGTGGAACA GGGCAGAAAG GAAAAGGATG AAATTTTCAG TATTAATGTC GGTCTATGAG AAAGAAAAAC CAGAGTTTCT TAGGGAATCT TTGGAAAGCA TCCTTGTCAA TCAAACAATG ATTCCAACGG AGGTTGTCTT GGTAGAGGAT GGGCCACTCA ATCAGAGCTT ATATAGTATT TTAGAAGAAT TTAAAAGTCG ATTTTCATTT TTTAAAACGA TAGCCTTGGA AAAGAATTCG GGTTTAGGAA TTGCACTGAA TGAAGGTTTG AMACATTGTA ATTATGAGTG GGTTTGCACG AMATGGATTC TGATGATGTT GCATATACAT ACACGTTTTG AAAAGCAAGT TAACTTTATA AAACAAAACC CGACTATAGA

TATTGAGATA	GATGAGTTCT	TAAATTCTAC	TAGTGAAATA	GTTTCTCATA	AAAATGTTCC
AACCCAGCAC	GATGAAATAT	TAAAGATGGC	AAGGCGGGAG	AAATCCATGT	
GCCACATGAC	TGTAATGTTT	AAAAAGAAAA	GTGTCGAGAG	AGCAGGGGG	TATCAAACAC
TTCCGTACGT	AGAAGATTAT	TTCCTTTGGG	TGCGCATGAT	TGCTTCAGGA	
TCGAAATTTG	CAAACATTGA	TGAAACACTA	GTTCTTGCAC	GTGTTGGAAA	TGGGATGTTC
AATAGGAGGG	GGAACAGAGA	ACAAATTAAC	AGTTGGACAT	TACTAATTGA	
ATTTATGTTA	GCTCAAGGAA	TTGTTACACC	ACTAGATGTA	TTTATTAATC	AAATTTACAT
TAGGGTCTTT	GTTTATATGC	CAACTTGGAT	AAAGAAACTC	ATTTATGGAA	
AAATCTTAAG	GAAATAGTAT	GATTACAGTA	TTGATGGCTA	CATATAATGG	AAGCCCATTT
ATAATAAAAC	AGTTAGATTC	AATTCGAAAT	CAAAGTGTAT	CAGCAGACAA	
AGTTATTATT	TGGGATGATT	GCTCGACAGA	TGATACAATA	AAAATAATAA	AAGATTATAT
AAAAAAATAT	TCTTTGGATT	CATGGGTTGT	CTCTCAAAAT	AAATCTAATC	
AGGGGCATTA	TCAAACATTT	ATAAATTTGA	CAAAGTTAGT	TCAGGAAGGA	ATAGTCTTTT
TTTCAGATCA	AGATGATATT	TGGGACTGTC	ATAAAATTGA	GACAATGCTT	
CCAATCTTTG	ACAGAGAAAA	TGTATCAATG	GTGTTTTGCA	AATCCAGATT	GATTGATGAA
AACGGAAATA	TTATCAGTAG	CCCAGATACT	TCGGATAGAA	TCAATACGTA	
CTCTCTAGA					

Fig. 5 cont.

101 in i ŲĮ.

Ē::5

AYRQGVRYIV ATSHRRKGMF ETPEKVIMTN FLQFKDAVAE VYPEIRLCYG AELYYSKDIL SKLEKKKVPT LNGSRYILLE FSSDTPWKEI QEAVNEVTLL GLTPVLAHIE RYDALAFHAE RVEELIDKGC YTQVNSNHVL KPTLIGDRAK EFKKRTRYFL EQDLVHCVAS DMHNLSSRPP FMREAYKLLT EEFGKDKAKA LLKKNPLMLL KNQAI

Fig. 5 cont.

CPS9D

MDLGTVTDKL	LERNSKRLIL	VCMDTCLLIV	SMILSRLFLD	VIIDIPDERF	ILAVLFVSIL
YLILSFRLKV	FSLITRYTGY	QSYVKIGLSL	ISAHSLFLII	SMVLWQAFSY	
RFILVSLFLS	YVMLITPRIV	WKVLHETRKN	AIRKKDSPLR	ILVVGAGDGG	NIFINTVKDR
KLNFEIVGIV	DRDPNKLGTF	IRTAKVLGNR	NDIPRLVEEL	AVDQVTIAIP	
SLNGKEREKI	VEICNTTGVT	VNNMPSIEDI	MAGNMSVSAF	QEIDVADLLG	RPEVVLDQDE
LNQFFQGKTI	LVTGAGGSIG	SELCRQIAKE	TPKRLLLLGH	GENSIYLIHR	
ELLEKYQGKI	ELVPLIADIQ	DRELIFSIMA	EYQPDVVYHA	AAHKHVPLME	YNPHEAVKNN
IFGTKNVAEA					
PGQTQFAAVR					EASRLVIQAG
HLAKGGEIFV	LDMGEPVQIL	ELARKVILLS	GHTEEEIGIV	ESGIRPGEKL	
YEELLSTEER	VSEQIHEKIF	VGRVTNKQSD	IVNSFINGLL	QKDRNELKNM	LIEFAKQE

Fig. 5 cont.

CPS9E

MYPICKRILA IIISGIAIVV LSPILLLIAL AIKLDSKGPV LFKQKRVGKN KSYFMIYKFR SMYVDAPSDM PTHLLKDPKA MITKVGAFLR KTSLDELPQL FNIFKGEMAI VGPRPALWNQ YDLIEERDKY GANDIRPGLT GWAQINGRDE LEIDEKSKLD GYYVQNMSLG LDIKCFLGTF LSVARSEGVV EGGTGQKGKG

Fig. 5 cont.

CPS9F

region (1990), Series (1990), Series

MKFSVLMSVY	EKEKPEFLRE	SLESILVNOT	MIPTEVVLVE	DGPLNQSLYS	ILEEFKSRFS
FFKTIALEKN					
IKONPTIDIE	IDEFLNSTSE	IVSHKNVPTQ	HDEILKMARR	EKSMCHMTVM	FKKKSVERAG
GYQTLPYVED	YFLWVRMIAS	GSKFANIDET	LVLARVGNGM	FNRRGNREQI	
NSWTLLIEFM	LAQGIVTPLD	VFINQIYIRV	FVYMPTWIKK	LIYGKILRK	

Fig. 5 cont.

CPS9G

46/59
MITVLMATYN GSPFIIKQLD SIRNQSVSAD KVIIWDDCST DDTIKIIKDY IKKYSLDSWV
VSQNKSNQGH YQTFINLTKL VQEGIVFFSD QDDIWDCHKI ETMLPIFDRE
NVSMVFCKSR LIDENGNIIS SPDTSDRINT YSL

Fig. 5 cont.

CPS9H

of the state of th

```
CTGCAGCACA TAAGCATGTT CCATTGATGG AATATAATCC ACATGAAGCA GTGAAGAATA
 ATATTTTTGG AACGAAGAAT GTGGCTGAGG CGGCTAAAAC TGCAAAGGTT
 GCCAAATTTG TTATGGTTTC AACAGATAAA GCTGTTAATC CGCCAAATGT CATGGGAGCG
 ACTAAACGTG TTGCAGAAAT GATTGTAACA GGTTTAAACG AGCCAGGTCA
 GACTCAATTT GCGGCAGTCC GTTTTGGGAA TGTTCTAGGT AGTCGTGGAA GTGTTGTTCC
 GCTATTCAAA GAGCAAATTA GAAAAGGTGG ACCTGTTACG GTTACCGACT
 TTAGGATGAC TCGTTATTTC ATGACGATTC CTGAGGCAAG TCGTTTGGTT ATCCAAGCTG
 GACATTIGGC AAAAGGIGGA GAAATCTIIG ICTIGGATAI GGGIGAGCCA
 GTACAAATCC TGGAATTGGC AAGAAAGTT ATCTTGTTAA GCGGACATAC AGAGGAAGAA
 ATCGGGATTG TAGAATCTGG AATCAGACCA GGCGAGAAAC TCTACGAGGA
 ATTGTTATCA ACAGAAGAAC GTGTCAGCGA ACAGATTCAT GAAAAAATAT TTGTGGGTCG
 CGTTACAAAT AAGCAGTCGG ACATTGTCAA TTCATTTATC AATGGATTAC
 TCCAAAAGA TAGAAATGAA TTAAAAGATA TGTTGATTGA ATTTGCAAAA CAAGAATAAG
 AAAGTAAAAA ATATTTTTAC TTTCCTAGAG TTTAAACGAT GTTTAAGTTC
 TAGGAAGGTT GGAATTGCTT TCGTGGAGGT GATAGATAGA AACCTATATA TTTGTAGAAG
 AAAGGATATT AAACTAAAGG TGAATCGGAA CATAAAGTTT AGATAGAGTT
 GGTATTTAAT GCCAAACAGG TGAATGCAAC CTCTCGCTCG TTACTAAGCA GGAGATAGTA
 AAGTTGCTTG AAAGAGAGTT TGTTAATCAG TATAAGTAGG CTAAAGTGAG
 AATATATATC TATTATTATC GGTAATGATA CTATTATTGA GAATTATTGT AGTGGGGATA
 AAAATAATTT TTGGTGATTT TATCGTCCGA CTTAAAGGTG GGTTAAAAAA
 GTACTTATAT TCTTTTAGAA TTGATGAAAA ATATGGGGGA ATATAATATT TATAGGAGAT
 ACGATGACTA GAGTAGAGTT GATTACTAGA GAATTTTTTA AGAAGAATGA
 AGCAACCAGT AAATATTTTC AGAAGATAGA ATCAAGAAGA GGTGAATTAT TTATTAAATT
 CTTTATGGAT AAGTTACTTG CGCTTATCCT ATTATTGCTA TTATCCCCAG
 TAATCATTAT ATTAGCTATT TGGATAAAAT TAGATAGTAA GGGGCCAATT TTTTATCGCC
AAGAACGTGT TACGAGATAT GGTCGAATTT TTAGAATATT TAAGTTTAGA
 ACAATGATTT CTGATGCGGA TAAAGTCGGA AGTCTTGTCA CAGTCGGTCA AGATAATCGT
ATTACGAAAG TCGGTCACAT TATCAGAAAA TATCGGCTGG ACGAAGTGCC
CCAACTITIT AATGITITAA TGGGGGATAT GAGCTITGTA GGTGTAAGAC CAGAAGTACA
AAAATATGTA AATCAGTATA CTGATGAAAT GTTTGCGACG TTACTTTTAC
CTGCAGGAAT TACTTCACCA GCGAGTATTG CATATAAGGA TGAAGATATT GTTTTAGAAG
AATATTGTTC TCAAGGCTAT AGTCCTGATG AAGCATATGT TCAAAAAGTA
TTACCAGAAA AAATGAAGTA CAATTTGGAA TATATCAGAA ACTTTGGAAT TATTTCTGAT
TTTAAAGTAA TGATTGATAC AGTAATTAAA GTAATAAAAT AGGAGATTAA
AATGACAAAA AGACAAAATA TTCCATTTTC ACCACCAGAT ATTACCCAAG CTGAAATTGA
TGAAGTTATT GACACACTAA AATCTGGTTG GATTACAACA GGACCAAAGA
CAAAAGAGCT AGAACGTCGG CTATCAGTAT TTACAGGAAC CAATAAAACT GTGTGTTTAA
ATTCTGCTAC TGCAGGATTG GAACTAGTCT TACGAATTCT TGGTGTTGGA
CCCGGAGATG AAGTTATTGT TCCTGCTATG ACCTATACTG CCTCATGTAG TGTCATTACT
CATGTAGGAG CAACTCCTGT GATGGTTGAT ATTCAAAAAA ACAGCTTTGA
GATGGAATAT GATGCTTTGG AAAAAGCGAT TACTCCGAAA ACAAAAGTTA TCATTCCTGT
TGATCTAGCT GGTATTCCTT GTGATTATGA TAAGATTTAT ACCATCGTAG
AAAACAAACG CTCTTTGTAT GTTGCTTCTG ATAATAAATG GCAGAAACTT TTTGGGCGAG
TTATTATCCT ATCTGATAGT GCACACTCAC TAGGTGCTAG TTATAAGGGA
AAACCAGCGG GTTCCCTAGC AGATTTTACC TCATTTTCTT TCCATGCAGT TAAGAATTTT
ACAACTGCTG AAGGAGGTAG TGTGACATGG AGATCACATC CTGATTTGGA
TGACGAAGAG ATGTATAAAG AGTTTCAGAT TTACTCTCTT CATGGTCAGA CAAAGGATGC
ATTAGCTAAG ACACAATTAG GGTCATGGGA ATATGACATT GTTATTCCTG
GTTACAAGTG TAATATGACA GATATTATGG CAGGTATCGG TCTTGTGCAA TTAGAACGTT
ACCCATCTTT GTTGAATCGT CGCAGAGAAA TCATTGAGAA ATACAATGCT
GECTTTGAGG GGACTTCGAT TAAGCCGTTG GTACACCTGA CGGAAGATAA ACAATCGTCT
ATGCACTTGT ATATCACGCA TCTACAAGGC TATACTTTAG AACAACGAAA
TGAAGTCATT CAAAAAATGG CTGAAGCAGG TATTGCGTGC AATGTTCACT ACAAACCATT
ACCTCTTCTC ACAGCCTACA AGAATCTTGG TTTTGAAATG AAAGATTTTC
CGAATGCCTA TCAGTATTTT GAAAATGAAG TTACACTGCC TCTTCATACC AACTTGAGTG
ATGAAGATGT GGAGTATGTG ATAGAAATGT TTTTAAAAAT TGTTAGTAGA
GATTAGTTAT TTTGGAAGGA GATATGGTGG AAAGAGATAT GGTGGAAAGA GACACGTTGG
TATCTATAAT AATGCCCTCG TGGAATACAG CTAAGTATAT ATCTGAATCA
ATCCAGTCAG TGTTGGACCA AACACACCAA AATTGGGAAC TTATAATCGT TGATGATTGT
TCTAATGACG AAACTGAAAA AGTTGTTTCG CATTTCAAAG ATTCAAGAAT
```

DNA Serotype 7

AAAGTTTTTT	AAAAATTCGA	ATAATTTAGG	GGCAGCTCTA	ACACGAAATA	AGGCACTAAG
AAAAGCTAGA	GGTAGGTGGA	TTGCGTTCTT	GGATTCAGAT	GATTTATGGC	
ACCCGAGTAA	GCTAGAAAAA	CAGCTTGAAT	TTATGAAAAA	TAATGGATAT	TCATTTACTT
ATCACAATTT	TGAAAAGATT	GATGAATCTA	GTCAGTCTTT	ACGTGTCCTG	
GTGTCAGGAC	CAGCAATTGT	GACTAGAAAA	ATGATGTACA	ATTACGGCTA	TCCAGGGTGT
TTGACTTTCA	TGTATGATGC	AGACAAAATG	GGTTTAATTC	AGATAAAAGA	
TATAAAGAAA	AATAACGATT	ATGCGATATT	ACTTCAATTG	TGTAAGAAGT	ATGACTGTTA
TCTTTTAAAT	GAAAGTTTAG	CTTCGTATCG	AATTAGAAAA	AA	

Fig. 6 cont.

AAHKHVPLME	YNPHEAVKNN	IFGTKNVAEA	AKTAKVAKFV	MVSTDKAVNP	PNVMGATKRV
AEMIVTGLNE	PGQTQFAAVR	FGNVLGSRGS	VVPLFKEQIR	KGGPVTVTDF	
RMTRYFMTIP	EASRLVIQAG	HLAKGGEIFV	LDMGEPVQIL	ELARKVILLS	GHTEEEIGIV
ESGIRPGEKL	YEELLSTEER	VSEQIHEKIF	VGRVTNKQSD	IVNSFINGLL	
OKDRNELKDM	LIEFAKOE				

Fig. 6 cont.

CPS7E

the hard hard the hard head head to be he had been seen being the hard hard hard hard

MTRVELITRE	FFKKNEATSK	YFQKIESRRG	ELFIKFFMDK	LLALILLLL	SPVIIILAIW
IKLDSKGPIF	YRQERVTRYG	RIFRIFKFRT	MISDADKVGS	LVTVGQDNRI	
					LLPAGITSPA
SIAYKDEDIV	LEEYCSQGYS	PDEAYVQKVL	PEKMKYNLEY	IRNFGIISDF	
KVMIDTVIKV	IK				

Fig. 6 cont.

CPS7F

the third that the time that the time that the time that the time that

MTKRO	NIPFS	PPDITOAEID	EVIDTLKSGW	ITTGPKTKEL	ERRLSVFTGT	NKTVCLNSAT
AGLEI	VLRIL	GVGPGDEVIV	PAMTYTASCS	VITHVGATPV	MVDIQKNSFE	
MEYDA	LEKAI	TPKTKVIIPV	DLAGIPCDYD	KIYTIVENKR	SLYVASDNKW	QKLFGRVIIL
SDSAF	ISLGAS	YKGKPAGSLA	DFTSFSFHAV	KNFTTAEGGS	VTWRSHPDLD	
DEEM'S	KEFQI	YSLHGQTKDA	LAKTQLGSWE	YDIVIPGYKC	NMTDIMAGIG	LVQLERYPSL
T.NRRE	REIIEK	YNAGFEGTSI	KPLVHLTEDK	QSSMHLYITH	LQGYTLEQRN	
EVIQ	MAEAG	IACNVHYKPL	PLLTAYKNLG	FEMKDFPNAY	QYFENEVTLP	LHTNLSDEDV
	MFTKT					

Fig. 6 cont.

CPS7G

MVERDMVERD TLVSIIMPSW NTAKYISESI QSVLDQTHQN WELIIVDDCS NDETEKVVSH FKDSRIKFFK NSNNLGAALT RNKALRKARG RWIAFLDSDD LWHPSKLEKQ LEFMKNNGYS FTYHNFEKID ESSQSLRVLV SGPAIVTRKM MYNYGYPGCL TFMYDADKMG LIQIKDIKKN NDYAILLQLC KKYDCYLLNE SLASYRIRK

Fig. 6 cont.

CPS7H

No. 2015. The control of the control

Cps2J					SSDSSTDICL		60
Cps2K					STONSEEICL		60
			*				
Cps2J	LFRLPNGGVS	NARNYGIKNS	TANYIMFVDS	DDIVDGNIVE	SLYTCLKEND	SDLSGGLLAT	120
-					1 1		
Cos2K	YFKKENGGLS	DARNYGISRA	KGDYLAFIDS	DDFIHSEFIQ	RL_HEATERE	NALVAVAG	117

Fig. 7

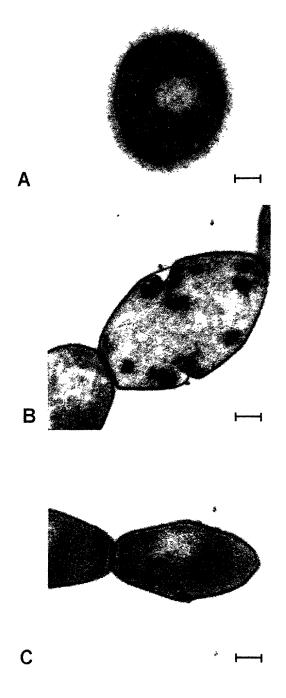
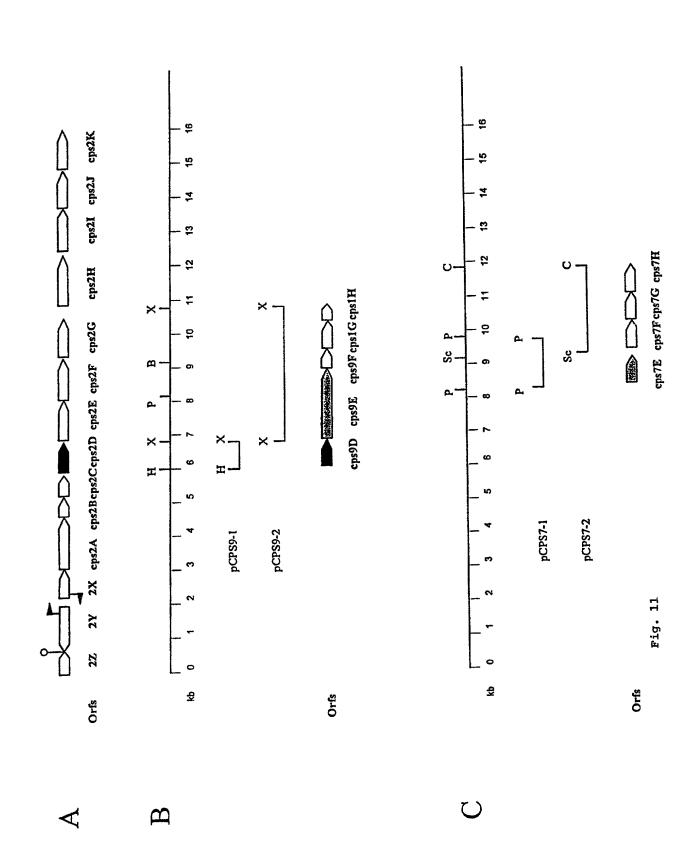
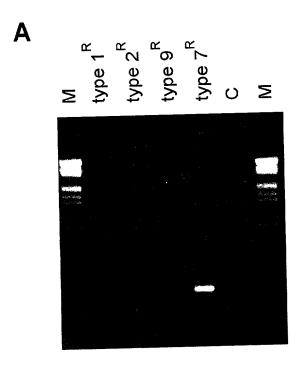


Fig. 8

y





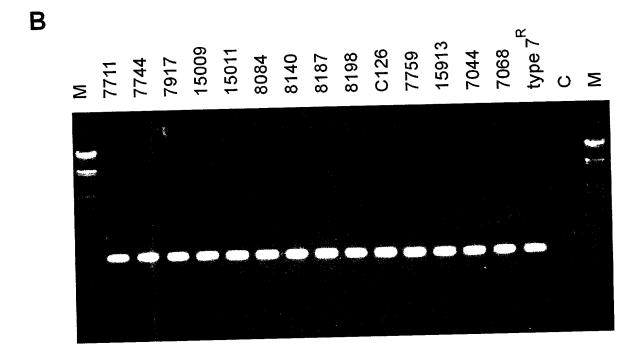


Fig. 12